

City of London Freight and Servicing SPD

Strategic Environmental Assessment

Prepared by LUC July 2017

Project Title: Strategic Environmental Assessment of the City of London Freight and Servicing SPD

Client: The City of London Corporation

Version	Date	Version Details	Prepared by	Checked by	Approved by
1.0	25/06/2017	Internal Draft	Alex Martin	Alex Martin	
2.0	04/07/2017	Draft for Client Comment	Alex Martin	Sarah Smith	Jeremy Owen
3.0	07/07/17	Final Draft for Consultation	Alex Martin	Sarah Smith	Jeremy Owen



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1 Introduction

1.1 This Strategic Environmental Assessment (SEA) Report has been prepared by LUC on behalf The City of London for The City of London Freight and Servicing Supplementary Planning Document (SPD). This SEA report should be read in conjunction with that document.

Context for the City of London Freight and Servicing SPD

- 1.2 The City of London ('the City') covers an area of just over one square mile, located within the central area of London. It is bordered by the London Boroughs of Islington, Hackney, Tower Hamlets, Southwark, Westminster, Camden and Lambeth.
- 1.3 The City represents the original core from which London developed and so it contains important historic buildings and areas as well as archaeological remains. There are a large number of conservation areas in the City, as well as protected vistas and views and the Tower of London World Heritage Site. There are over 600 listed buildings and several biodiversity designations, including a Site of Metropolitan Importance for Nature Conservation, The River Thames and its Tidal Tributaries.
- 1.4 The principal activity of the City is in financial and businesses services; it is a centre of global importance for these services, and as a result forms a major component of the British economy.
- 1.5 The City provides employment for approximately 450,000¹ people, most of whom commute to work from elsewhere in London and the surrounding regions. The extensive provision of public transport in the area makes this possible.
- 1.6 The City contains the highest density of development in Britain and its buildings are subject to a high rate of redevelopment. Offices dominate the land use, and occupy approximately three quarters of its floorspace. Other land uses include retail, recreation and cultural activities and provide important services for workers and residents of the area however, each of these only accounts for a small proportion of floorspace. Open spaces occupy a small but important proportion of the land area.
- 1.7 The residential population of the City, as defined by the 2011 census is approximately 7,400 and the number is growing. Over 29,000 students study in the City and increasing numbers of visitors need to be accommodated.

The City of London Freight and Servicing SPD

- 1.8 Despite the small footprint of the City of London, the large working population generates significant demand for physical goods and services. The working population of the City is forecast to grow to 475,000, and the residential population to 10,250 by 2036, so the need to manage the effects of the increasing demand for space on the transport network continues to grow. The efficient movement of goods and provision of services are fundamental requirements for a successful city.
- 1.9 The City of London Freight and Servicing SPD will set out the City Corporation's requirements for new development in relation to the management of freight and servicing. The document is intended to be read in conjunction with the Standard Highway and Servicing Requirements for Development in the City of London, the Code of Practice for Deconstruction and Construction Sites (published by the City Corporation) and the Construction Logistics Plan Guidance (published by Transport for London).

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¹ City of London Employment Trends 2016, BRES 2016

- 1.10 Briefly the document will set out:
 - The background to, and definition of freight and servicing and factors that drive the need to manage freight and servicing including; traffic, road danger reduction, air quality and carbon emissions.
 - The policy context, including key local, national and international policy and also including existing and planned schemes and projects.
 - The vision for the management of freight and servicing in the City 'reduce the number of freight and delivery vehicles and their environmental impact on the City's streets, particularly at peak times, whilst still allowing the City to flourish and avoiding negative impacts beyond the City's boundaries.' The SPD will help to achieve the vision by setting out guidance for new development that will limit the impact of new and additional freight demand on the City and beyond.
 - The aims of the SPD 'to minimise freight and servicing trips, to match demand to network capacity and to mitigate the impact of freight trips'.
 - Guidelines, actions and measures for achieving the above aims.
 - Measures for each type of development including office, multi-tenanted buildings, general retail, food and drink, hotels and hospitality, and residential.
 - The need and requirement for construction logistics plans.
- 1.11 The SPD will also include guidance on the use of night time servicing as well as measures that encourage the use of consolidation centres, which may be located outside of the City.

Strategic Environmental Assessment

1.12 Strategic Environmental Assessment (SEA) is a statutory assessment process, required under the SEA Directive², which was transposed into UK law by the SEA Regulations (Statutory Instrument 2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment and which set the framework for future consent of projects requiring Environmental Impact Assessment (EIA)³. A screening exercise was undertaken in February 2017⁴. This concluded that the SPD could give rise to significant environmental effects and therefore it was screened into the SEA process. The purpose of SEA, as defined in Article 1 of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans....with a view to promoting sustainable development'.

Structure of this report

1.13 This report is the SEA report for the City of London Freight and Servicing Supplementary Planning Document (SPD) **Table 1.1** below signposts how the requirements of the SEA Regulations have been met within the SEA work undertaken to date.

² SEA Directive 2001/42/EC

 $^{^{3}}$ Under EU Directives 2011/92/EU and 2014/52/EC concerning EIA

⁴ City of London Freight and Servicing SPD Screening Statement, February 2017

Table 1.1 Requirements of the SEA Regulations and where these have been addressed

SEA Regulations Requirements	Where covered in this SEA report
Preparation of an environmental report in which the likely significated of implementing the plan or programme, and reasonable alternation objectives and geographical scope of the plan or programme, are evaluated. The information to be given is (Part 3 and Schedule 2)	ves taking into account the identified, described and of the SEA Regulations):
 a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes 	Chapter 3 and Appendix 2.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Chapter 3 and Appendix 3.
c) The environmental characteristics of areas likely to be significantly affected	Chapter 3 and Appendix 3.
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	Chapter 3 and Appendix 3.
e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation	Chapter 3 and Appendix 2.
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors ⁵ .	Chapter 4
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Chapters 4
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapter 2 and Appendix 4.
i) a description of measures envisaged concerning monitoring in accordance with Reg. 17;	Chapter 5
j) a non-technical summary of the information provided under the above headings	A separate non-technical summary document has been prepared to accompany this full SEA report.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Reg. 12(3))	Addressed throughout this SEA report.

 $^{^{5}}$ These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects

SEA Regulations Requirements	Where covered in this SEA report
Onsultation: authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Reg. 12(5))	Consultation on the SEA Scoping Report for the draft SPD was undertaken between the 23 rd and the 28 th of June 2017. The consultee responses and our responses are included in Appendix 1 .
 authorities with environmental responsibility and the public, shall be given an effective opportunity to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Reg. 13(3), 13(4)) 	Consultation is being undertaken in relation to the draft SPD between 7 th August and 30 th September 2017.
other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Reg. 14).	N/A
Taking the environmental report and the results of the condecision-making (Reg. 16)	sultations into account in
 Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Reg.s 13 and 14 must be informed and the following made available to those so informed: the plan or programme as adopted a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report of Reg. 12, the opinions expressed pursuant to Reg. 13(2)(d) and the results of consultations entered into pursuant to Reg. 14(4) have been taken into account, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and the measures decided concerning monitoring (Reg. 16(4)(f)) 	To be addressed after the SPD is adopted.
Monitoring of the significant environmental effects of the plan's or programme's implementation (Reg. 17)	To be addressed after the SPD is adopted.
Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Regulations.	This report has been produced in line with current guidance and good practice for SEA and this table demonstrates where the requirements of the SEA Regulations have been met.

- 1.14 This section has introduced the SEA process for the City of London Freight and Servicing SPD. The remainder of this report is structured into the following sections:
 - **Chapter 2: Methodology** describes the approach that has been taken to the SEA of the Freight and Servicing SPD and introduces the SEA framework used in the appraisal.
 - Chapter 3: Environmental context for development in the City of London summarises the relationship between the Freight and Servicing SPD and other relevant plans, policies and programmes, summarises environmental characteristics of the District and identifies the key environmental issues facing the City of London.
 - **Chapter 4: SEA findings for the SPD options** sets out the SEA findings for the options, including the preferred approach, that have been considered in the SPD.
 - **Chapter 5: Monitoring** describes the approach that should be taken to monitoring the likely significant effects of the SPD (both positive and negative) and proposes monitoring indicators.

- **Chapter 6: Conclusions** summarises the key findings from the SEA and describes the next steps to be undertaken in the SPD preparation process.
- 1.15 The main body of the report is supported by a number of appendices:
 - **Appendix 1** presents the consultation comments that were received in relation to the SEA Scoping Report (June 2017) and describes how those comments have been addressed.
 - Appendix 2 presents the review of relevant plans, policies and programmes.
 - Appendix 3 contains the baseline environmental information for the City of London.
 - **Appendix 4** presents an audit trail of the options considered and provides the City of London Corporation's reasons for including each one, or not, in the SPD.

2 Methodology

2.1 In addition to complying with legal requirements, the approach taken to the SEA of the Freight and Servicing SPD is based on current best practice and the guidance on SEA set out in the National Planning Practice Guidance, which involves carrying out SEA as an integral part of the planning process. **Table 2.1** below sets out the main stages of the planning process and shows how these correspond to the SEA process.

Table 2.1 Corresponding stages in SEA

Step 1: Evidence Gathering and engagement

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

- 1: Identifying other relevant policies, plans and programmes, and environmental objectives
- 2: Collecting baseline information
- 3: Identifying environmental issues and problems
- 4: Developing the SEA framework
- 5: Consulting on the scope of the SEA

Step 2: Production

Stage B: Developing and refining options and assessing effects

- 1: Testing the SPD objectives against the SEA Framework
- 2: Developing the SPD options
- 3: Evaluating the effects of the SPD
- 4: Considering ways of mitigating adverse effects and maximising beneficial effects
- 5: Proposing measures to monitor the significant effects of implementing the SPD

Stage C: Preparing the Strategic Environmental Assessment Report

• 1: Preparing the SEA Report

Stage D: Seek representations on the SPD and the Strategic Environmental Assessment Report

- 1: Public participation on the SPD and the SEA Report
- 2(i): Appraising significant changes
- 2 (ii) Appraising significant changes resulting from representations

Step 3 & 4: Adoption and Monitoring

• 3: Making decisions and providing information

Stage E: Monitoring the significant effects of implementing the SPD

- 1: Finalising aims and methods for monitoring
- 2: Responding to adverse effects
- The following sections describe the approach that has been taken to the SEA of the Freight and Servicing SPD to date and provide information on the subsequent stages of the process.
- 2.3 The Screening Statement (February 2017)⁶ screened the SPD into the SEA process on the basis that it is likely to have significant effects on the environment. This is due to the fact that the SPD proposes actions and land use for consolidation centres outside the City without identifying specific locations, and proposes out of hours servicing without evaluating the impacts of such servicing beyond the City's boundaries. Identified effects relate primarily to increases in carbon emissions and air pollutants, but also include amenity issues such as noise pollution and increased traffic.

 $^{^{6}}$ City of London Freight and Servicing SPD Screening Statement, February 2017

Stage A: Scoping

- 2.4 The SEA process began in June 2017 with the production of a Scoping Report for the Freight and Servicing SPD, which was prepared by LUC on behalf of the City of London Corporation. During the Scoping stage of the SEA, the work that had previously been carried out during the Sustainability Appraisal of the City of London Local Plan was drawn on as appropriate, as some of that work is applicable to this SEA.
- 2.5 The scoping stage of the SEA involves collating information about the environmental baseline for the SPD area and the key environmental issues facing it, as well as information about the policy context for the preparation of the SPD. The SEA Scoping Report presented the outputs of the following tasks:
 - Policies, plans and programmes of relevance to the Freight and Servicing SPD were identified and the relationships between them were considered.
 - In line with the requirements of the SEA Regulations, baseline information was collected on the following 'SEA topics': biodiversity (including flora and fauna), population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage and the landscape. This baseline information provides the basis for predicting and monitoring the likely effects of the SPD and helps to identify alternative ways of dealing with any adverse effects identified.
 - Drawing on the review of relevant plans, policies and programmes and the baseline information, key environmental issues for the City were identified (including environmental problems, as required by the SEA Regulations). Consideration was given to the likely evolution of each issue if the SPD were not to be implemented. If, drawing on the baseline information and relevant plans, policies and programmes it was considered that the SPD was unlikely to have significant effects upon certain SEA topics, they were scoped out.
 - A SEA 'framework' was then presented, setting out the SEA objectives against which options
 would be appraised. The SEA framework provides a way in which the environmental impacts
 of implementing a plan and reasonable alternatives (i.e. options) can be described, analysed
 and compared. The SEA framework comprises a series of sustainability objectives and
 associated questions that can be used to 'interrogate' options during the plan-making process.
 These SEA objectives define the long-term aspirations of the City with regard to
 environmental issues. During the SEA, the performance of the options is assessed against
 these SEA objectives and questions.
- 2.6 The most recent versions of the policy review and baseline information can be found in **Appendices 2** and **3** of this report.
- 2.7 Public and stakeholder participation is an important element of the SEA and wider plan-making processes. It helps to ensure that the SEA report is robust and has due regard for all appropriate information that will support the SPD in making a contribution to sustainable development. The SEA Scoping Report for the Freight and Servicing SPD was published in June 2017 for a five week consultation period with the statutory consultees (Natural England, the Environment Agency and Historic England). The comments received during the consultation were then reviewed and addressed as appropriate in this SEA. **Appendix 1** of this report lists the comments that were received during the scoping consultation and describes how each one was addressed.
- 2.8 **Table 2.2** below presents the 5 SEA objectives in the City of London SEA framework and shows how the 'SEA topics' (listed in Schedule 2 of the SEA Regulations) that were scoped in to the assessment have been covered by these. Only those issues that have been scoped in to the SEA have been included in the below table. Those issues that have been scoped out are not expected to be influenced by the SPD and therefore have not been considered. Those issues that have been scoped out are listed below. The statutory consultation bodies did not raise any issues with the scoping out of these topics.
 - Landscape The effects on landscape were scoped out of the SEA as it is not envisaged that the Freight and Servicing SPD will have any significant effects on the landscape character of the City. This is because the SPD will not propose specific sites for new development or

- infrastructure itself, rather its aim will be to limit the impact of additional freight and servicing trips that new development may attract.
- Biodiversity, Flora and Fauna Issues regarding biodiversity, Flora and Fauna have been scoped out of the SEA. As the SPD will not propose any specific sites for new development or infrastructure and instead will aim to reduce the impacts of freight and servicing that new development may give rise to, it is considered that the Freight and Servicing SPD will not significantly affect the priority species or habitats in the City.
- Water The effect of the SPD on water quality within the City has been scoped out of the SEA. It is not envisaged that any of the measures within the SPD will have a significant effect upon water quality in the area. This is because the SPD is aiming to reduce the environmental impacts of freight and servicing trips generated by new development, rather than proposing specific sites for new development or new infrastructure which may have an effect on water quality.
- Soils Effects on soils have been scoped out of the SEA as it is not expected that the
 measures contained within the Freight and Servicing SPD will have any significant effects on
 soil quality in the City. As above this is because the SPD will not propose specific sites for
 new development, rather its aim will be to limit the impact of additional servicing and delivery
 for new developments.

Table 2.2 SEA framework for the City of London Freight and Servicing SPD

SEA Objectives	Appraisal Question	SEA Regulations Topic(s) covered	
SEA1 Improve air quality	Reduce the number of vehicles on the City's roadsReduce congestion on the City's roads	Air Quality	
SEA2 Reduce activities that exacerbate climate change	 Reduce carbon emissions through minimising traffic movements in the City Utilise low or zero carbon transport where possible 	Climate Change	
SEA3 Adopt the 'Waste hierarchy' in all activities – reduce , reuse, recycle	 Reduce the amount of waste requiring removal through reuse and recycling Reduce the number of waste collection trips 	Material Assets	
SEA4 Improve the health of City workers, residents and visitors	 Improve safety for pedestrians and cyclists Improve air quality (see SEA objective 1)⁷ Reduce noise and light pollution 	Population Human Health	
SEA5 Conserve and enhance the historic environment	 Maintain the character and setting of heritage assets in the City 	Cultural heritage	

⁷ 'Elevated levels and / or long term exposure to air pollution can lead to serious symptoms and conditions affecting human health. This mainly affects the respiratory and inflammatory systems but can also lead to more serious conditions such as heart disease and cancer.' https://uk-air.defra.gov.uk/air-pollution/effects.

SEA Stage B: Developing and refining options and assessing effects

- 2.9 Developing options for a plan is an iterative process, which can involve a number of rounds of consultation with stakeholders and the public. Consultation responses and the SEA process can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan. In terms of the Freight and Servicing SPD, options include different measures for reducing the impact of freight and servicing on the City.
- 2.10 Regulation 12 (2) of the SEA Regulations requires that:
 - 'The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of—
 - (a) implementing the plan or programme; and
 - (b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme.'
- 2.11 It should be noted that any alternatives considered need to be 'reasonable'. This implies that alternatives that are 'not reasonable' do not need to be subject to appraisal. Examples of unreasonable alternatives could include options that do not meet the objectives of the plan or that do not comply with national policy (e.g. the National Planning Policy Framework).
- 2.12 It also needs to be recognised that the SEA findings are not the only factors taken into account when determining which options to take forward in a plan. There will often be an equal number of positive or negative effects identified for each option, such that it is not possible to 'rank' them based on environmental performance in order to select a preferred option. Factors such as public opinion, deliverability and conformity with national policy will also be taken into account by planmakers when selecting preferred options for their plan.
- 2.13 The following section provides an overview of how the appraisal of options has fed into the development of measures that are now included in the Freight and Servicing SPD. The reasons for selecting or rejecting each reasonable alternative site option are detailed in **Appendix 4**.

Identification and appraisal of options

- 2.14 Reasonable alternative options for the SPD were identified by the City of London prior to the preparation of the SPD and were drawn from the most up-to-date evidence, and the current operational procedures and best practice for freight and servicing in the City.
- 2.15 The alternative options that are considered include retaining business as usual, which would continue to carry out freight and servicing in line with policies set out in the Local Plan, and other specific measures that would work to reduce the environmental impact of freight and servicing.

SEA Stage C: Preparing the Strategic Environmental Assessment Report

2.16 This SEA report describes the process that has been undertaken to date in carrying out the SEA of the Freight and Servicing SPD. It sets out the findings of the appraisal of options and measures set out in the SPD highlighting any likely significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects as relevant).

SEA Stage D: Consultation on the City of London Freight and Servicing SPD

2.17 The City of London is inviting comments on the draft Freight and Servicing SPD and this SEA Report. This SEA Report is being published on the City of London Corporation's website for consultation between 7th August and 30th September 2017.

SEA Stage E: Monitoring implementation of the Freight and Servicing SPD

2.18 Monitoring of environmental effects identified should be carried out after adoption of the SPD, therefore recommendations for monitoring the likely significant environmental effects of implementing the SPD are presented in **Chapter 5**.

Appraisal methodology

2.19 The reasonable alternative options and the selected options set out in the SPD have been appraised against the five SEA objectives in the SEA framework (see **Table 2.2** earlier in this section), with scores being attributed to each option to indicate its likely environmental effects on each SEA objective as follows:

Figure 2.1 Key to symbols and colour coding used in the SEA of the City of London Freight and Servicing SPD

++	The option or policy is likely to have a significant positive effect on the SEA objective(s).
+	The option or policy is likely to have a minor positive effect on the SEA objective(s).
0	The option or policy is likely to have a negligible or no effect on the SEA objective(s).
-	The option or policy is likely to have a minor negative effect on the SEA objective(s).
	The option or policy is likely to have a significant negative effect on the SEA objective(s).
?	It is uncertain what effect the option or policy will have on the SEA objective(s), due to a lack of data.
+/-	The option or policy is likely to have a mixture of positive and negative effects on the SEA objective(s).

- 2.20 Note that where a potential positive or negative effect is uncertain, a question mark was added to the relevant score (e.g. +? or -?) and the score is colour coded as per the potential positive, negligible or negative score (e.g. green, yellow, orange, etc.).
- 2.21 The likely effects of the options need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. This appraisal has attempted to differentiate between the most significant effects and other more minor effects and record these through the use of the symbols shown above. The dividing line in making a decision about the significance of an effect is often quite small. Where either '++' or '--' has been used to distinguish significant effects from more minor effects (+ or -) this is because the effect of an option on the SEA objective in question is considered to be of such magnitude that it will have a noticeable and measurable effect taking into account other factors that may influence the achievement of that objective. However, scores are relative to the scale of proposals under consideration.

Difficulties Encountered

- 2.22 It is a requirement of the SEA Regulations that consideration is given to any data limitations or other difficulties that are encountered during the SEA process.
- 2.23 The main difficulty encountered when assessing the Freight and Servicing SPD, was the uncertainty surrounding the measure setting out the use of out of town consolidation centres. The City Corporation have confirmed that private developers will need to identify potential suitable sites, ideally in Preferred Industrial Locations, choose to develop these, and make an application to the relevant planning authority, who will then have the final decision on whether the development is to be permitted. For this reason the City has little authority over the implementation of the consolidation centres. Because of this, very little is known about the locations of potential consolidation centres and how they may operate, and so uncertainty exists in the conclusions drawn regarding their effects.

3 Environmental Context for Development in the City of London

Review of Plans, Policies and Programmes

- 3.1 The Freight and Servicing SPD is not prepared in isolation, being influenced by other plans, policies and programmes and by broader environmental objectives. It needs to be consistent with international and national guidance and planning policies and should contribute to the goals of a wide range of other programmes and strategies. The SPD must also conform to environmental protection legislation and contribute to achieving the environmental objectives established at the international and national levels.
- 3.2 A review has been undertaken of the other plans, policies and programmes that are relevant to the Freight and Servicing SPD.

Schedule 2 of the SEA Regulations requires:

- (1) 'an outline of the...relationship with other relevant plans or programmes'; and
- (5) 'the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation'
- 3.3 It is necessary to identify the relationships between the Freight and Servicing SPD and other relevant plans, policies and programmes so that any potential links can be built upon and any inconsistencies or potential conflicts addressed.

Key international plans, policies and programmes

- 3.4 At the international level, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive') is particularly important as it sets out the requirements for SEA. SEA should be undertaken iteratively and integrated into the production of the SPD in order to ensure that any potential negative environmental effects are identified and can be mitigated.
- 3.5 Also at the international level is the Air Quality Directive, 2008/50/EC, on ambient air quality and cleaner air for Europe. The objective of this directive is to avoid, prevent and reduce harmful effects of ambient air pollution on human health and the environment.
- 3.6 There are a wide range of other EU Directives, most of which have been transposed into UK law through national-level policy; the international directives have been included in **Appendix 2** for completeness.

Key national plans, policies and programmes

3.7 There is a wide range of national level plans, policies and programmes with relevant objectives for the SEA, which are summarised in **Appendix 2**. However, the most significant policy context for the SPD is the National Planning Policy Framework (NPPF) in 2012 and the online Planning Practice Guidance (PPG)⁸. The City of London Freight and Servicing SPD must be consistent with the requirements of the NPPF, which sets out information about reductions in emissions and congestion and the use of sustainable transport modes. It states that:

'Encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. In preparing Local Plans, local planning authorities should therefore support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport. (NPPF, para 30)'

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⁸ http://planningguidance.planningportal.gov.uk/

'Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to... ... accommodate the efficient delivery of goods and supplies (NPPF, para 35)'

Local plans, policies and programmes

3.8 At the sub-regional and local levels there are a wide range of plans and programmes that are specific to the City of London and Greater London, which provide further context for the Freight and Servicing SPD.

City of London Local Plan

- 3.9 The City of London Local Plan is the statutory planning document for the City. The following policies are applicable to the Freight and Servicing SPD; the SPD must be in general conformity with the Local Plan.
 - Policy DM 3.4 Traffic management
 - Core Strategic Policy CS9: Thames and the Riverside
 - Core Strategic Policy CS16: Public Transport Streets and Walkways
 - Policy DM 15.6 Air Quality
 - Policy DM 16.1 Transport impacts of development
 - Policy DM 16.5 Parking and servicing standards
 - Policy DM 16.8 River transport
 - · Core Strategic Policy CS17: Waste
 - Policy DM 17.1 Provision for waste in development schemes
 - Policy DM 17.2 Designing out construction waste

Standard Highway and Servicing Requirements for Development in the City of London

3.10 The Standard Highway and Servicing Requirements for Developments in the City of London document sets out the guidelines for physical infrastructure associated with development-related highway and servicing arrangements. This document should be the point of reference for all matters relating to development impact on the public highway.

City of London Delivery and Servicing Guidance

3.11 The City of London Delivery and Servicing Guidance provides practical information on how to manage freight associated with an existing site or new development through a Delivery and Servicing Plan. The guidance closely supports the SPD.

Air Quality Strategy and SPD

- 3.12 The City of London Air Quality Strategy 2015 2020 and emerging Air Quality SPD set out the City's aims and responsibilities on managing Air Quality. The strategy aims to fulfil statutory obligations relating to air quality management, encourage measures to reduce harmful emissions in the City, and raise public awareness of air quality issues.
- 3.13 The Freight and Servicing SPD is in accordance with the Air Quality Strategy policies, particularly;
 - Policy 2: Political influence and commitment
 - Policy 5: Reducing emissions from transport
 - Action 29: Reducing Air Quality Impact of Freight
 - Policy 6: Working with the Mayor

Noise Strategy

3.14 The City of London Noise Strategy 2016 – 2026 sets out the City Corporation's strategy for managing noise levels from all sources. Unwanted noise can be a nuisance to both residents and businesses and while some noise in a working environment is inevitable to the City Corporation

has a statutory responsibility to manage and minimise exposure to excessive or unnecessary noise, while ensuring that the city can function and flourish.

- 3.15 In relation to new development, policies in the Noise Strategy which are relevant to the SPD include:
 - Policy Developments 1 New noise making and noise sensitive development
 - Policy Transport 12 Night Time Servicing
 - Policy Transport 13 General
 - Policy Transport 14 General

Road Danger Reduction Plan 2013

3.16 The City of London Road Danger Reduction Plan sets out measures to reduce road danger at source. The Plan recognises the disproportionate danger posed by goods vehicles and proposes a combination of engineering measures and Education, Training and Publicity schemes to tackle road danger.

Waste Strategy

- 3.17 The City of London Waste Strategy 2013 2020 set out the City Corporation's vision "To increase reuse and recycling and reduce waste arisings and carbon impacts associated with waste management from householders, businesses and visitors within the City, to include City of London buildings and staff".
- 3.18 Objective 7 of the strategy establishes the aim to reduce our negative impact on climate change and improve air quality in the City. This includes continuing to transport waste out of the City by river from the facility at Walbrook Wharf, removing an estimated 3744 HGV journeys from City streets each year.

Thames Strategy

3.19 The Thames Strategy SPD sets out the City Corporation's overarching strategy for use of the river. The strategy supports the Local Plan policy CS9 Thames and the Riverside with regard to promoting the use of the river for freight as well as passenger transport. The SPD supports the safeguarding of the waste transfer site at Walbrook Wharf, and the reinstatement of the pier at Swan Lane for passenger or freight use.

Public Realm SPD

- 3.20 The City of London Public Realm SPD sets out 10 aims to maintain and enhance the City's built environment and provide a safe, high quality and inclusive place in which to work, live and enjoy.
- 3.21 Particularly relevant to the management of freight and servicing the SPD aims to:
 - Encourage simpler, more spacious and less cluttered streets and spaces (Aim 3)
 - Provide more sustainable streets and spaces (Aim 6)
 - Support and encourage wellbeing and healthy lifestyles (Aim 7)
 - Provide better connected and more inclusive streets and spaces (Aim 9)
- 3.22 The Public Realm SPD supports the management of out of hours deliveries and times closures of streets where appropriate.

London Plan

- 3.23 The London Plan is the strategic planning document for the 32 London boroughs and the City of London. It sets out the framework for development in London and the policy context for local planning policies. The London Plan is currently under review by the Mayor of London however, until this is complete the most recent version from March 2016 remains in place.
- 3.24 Policies from the London Plan relevant to the SPD include:
 - Policy 2.17 Strategic Industrial Locations
 - Policy 6.1 Strategic Approach to Transport

- Policy 6.4 Enhancing London's Transport Connectivity
- Policy 6.11 Smoothing Traffic Flow and Tackling Congestion
- Policy 6.14 Freight
- Policy 6.15 Strategic Rail Freight Interchanges
- Policy 7.14 Improving Air Quality
- Policy 7.15 Reducing and Managing Noise, Improving and Enhancing the Acoustic Environment and promoting appropriate soundscapes
- Policy 7.24 Blue Ribbon Network
- Policy 7.26 Increasing the use of the Blue Ribbon Network for Freight Transport

The Mayor's Transport Strategy

- 3.25 The Mayor's Transport Strategy (MTS) sets out the Mayor's Transport Policy. As with the London Plan, the current strategy dates from a previous Mayoral Administration. Although a new MTS is currently in draft format, the previous strategy remains place until the new document is formally adopted.
- 3.26 The existing MTS sets out policies to promote the use of river and rail for fright movements through safeguarding existing wharves and promoting rail freight infrastructure.
- 3.27 The MTS also addresses the safety implications of freight movements, promoting schemes such as the Fleet Operator Recognition Scheme (FORS) and improvements to vehicle and driver safety. The document also supports efficiencies through consolidation and out of hours delivery and servicing where possible, supported by quiet delivery schemes and Delivery and Servicing Plans.
- 3.28 The new Mayor's Transport Strategy draft for consultation was published in June 2017. Although this is a draft document and subject to change, the document gives a strong indication of the Mayor's transport priorities for his term of office. The draft strategy proposes a 10 per cent reduction in central London lorry and van use by 2026. In particular there is a focus on the use of consolidation centres for construction and other sectors.
 - The Safeguarding Wharfs Final Recommendation Report 2013
- 3.29 The report recommended that Walbrook Wharf, the only active wharf in the City is retained as a waste facility and increased use for other activities should be encouraged.
 - A City for all Londoners 2016
- 3.30 This report sets out the strategic direction of travel for the new Mayor of London. The document does not include specific policies but gives an indication of the priorities of the new Mayor.
- 3.31 The movement of freight is specifically mentioned by the Mayor, in the context of an expected rise in van use associated with the changing needs and expectations of businesses and customers. The Mayor cites potential solutions such as riverside lorry consolidation centres, more deliveries being made by bike and changing the way streets are used at different times of the day.
- 3.32 The overarching 'Healthy Streets' approach to managing the street network is a key part of the Mayor's vision. In central London this means a shift towards reducing motorised traffic and fewer deliveries in peak times.

Existing and Forthcoming Schemes

Low Emission Neighbourhood

3.33 The City of London Low Emission Neighbourhood (LEN) is being introduced in the Barbican area by 2019. This project, which is part-funded by the Mayor of London, aims to trial several high-impact activities that will address local air quality issues and act as a pilot area for the rest of the City. Proposals include working with businesses to tackle emissions from delivery and servicing trips, looking at the potential for local freight consolidation, and zero emission last mile deliveries.

Low Emission Zone

- 3.34 Covering most of Greater London, the Low Emission Zone requires larger vehicles and older small commercial vehicles to pay a charge if they do not reach certain emissions standards. At present, only vehicles registered before 2006 are required to pay the charge, and compliance is very high.
 - London Lorry Control Scheme (LLCS)
- 3.35 Administered by London Councils, the LLCS restricts the routes of large goods vehicles over 18 tonnes at night and at weekends. The aim of the scheme is to reduce noise pollution in residential areas. The scheme restricts large vehicles to a core network of main roads for as much of their journey as possible, with penalties issued for use of inappropriate routes. Vehicles wishing to use roads off the core network during the restricted hours must apply for a free permit to do so.

Congestion Charge

3.36 The Congestion Charge is a daily charge applying to all vehicles entering central London between 7am and 6pm Monday to Friday. The charge does not vary with the type of vehicle, so a large HGV would pay the same as a small van to enter the zone. Some discounts and exemptions do apply for Ultra Low Emission Vehicles, but in general most internal combustion engine vehicles will pay the charge.

Emissions Surcharge (T charge)

3.37 The Emissions Surcharge, which uses the same boundaries and time restrictions as the Congestion charge, requires older vehicles not meeting certain emissions criteria to pay a daily charge to enter the area. The Emissions Surcharge is introduced from 23rd October 2017 as an interim scheme, pending the introduction of the Ultra Low Emission Zone.

Ultra Low Emission Zone

3.38 The Ultra Low Emission Zone (ULEZ) will come into force in September 2020 and will replace the Emissions Surcharge. The ULEZ will require all vehicles within the Congestion Charge area to meet strict emissions standards, or pay a daily charge in addition to the Congestion Charge.

Baseline Information

- 3.39 Baseline information provides the basis for predicting and monitoring the likely environmental effects of a plan and helps to identify key environmental issues and means of dealing with them.
- 3.40 Schedule 2 of the SEA Regulations requires information to be provided on:
 - (2) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.
 - (3) The environmental characteristics of areas likely to be significantly affected.
 - (4) Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive.
- 3.41 The baseline information for the City of London, which was originally presented in the Scoping Report, is set out in **Appendix 3**.

Key Environmental Issues

- 3.42 An up-to-date set of key environmental issues for the City of London was identified during the Scoping stage of the SEA and was presented in the Scoping Report.
- 3.43 The SEA Regulations (Schedule 2) require that the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme are described. In order to address this requirement, **Table 3.1** overleaf describes the likely evolution of each key environmental issue if the SPD were not to be adopted.

Table 3.1 Key Environmental Issues for the City of London and likely evolution without implementation of the SPD

Key Environmental Issues for the City of London of relevance to the Freight and Servicing SPD

Likely Evolution without the Freight and Servicing SPD

Climatic Factors

Carbon emissions and climate change are of significant importance to the City. Among other sources, motorised transport is a contributor to Carbon emissions in the City.

The City of London Local Plan includes the following policies to tackle a reduction in carbon emissions: CS15 – Sustainable Development and Climate Change; DM15.1 – Sustainability requirements; DM15.2 – Energy and CO2 emissions assessments; DM15.3 Low and zero carbon technologies; DM15.4 Offsetting of carbon emissions and DM15.5 Climate change resilience and adaptation.

The implementation of the SPD offers opportunities to further tackle this issue through the reduction and consolidation of freight and servicing, although localised air quality issues may arise around the proposed consolidation centres. Without the implementation of the SPD it is considered that a reduction in carbon emissions is still achievable with the support of policies in the Local Plan but this may be to a lesser extent or be achieved over a longer time scale as the issues associated with freight and servicing will not be as well addressed. However as a global issue, climate change will continue to be a key consideration, regardless of the policies and measures within both the Local Plan and the Freight and Servicing SPD.

Cultural Heritage

The City is the historic core from which London developed. Consequently it is an area of great archaeological importance and contains many buildings and areas of historic and architectural value. Changes in vehicle movements and development of consolidation centres may affect the settings and views of city landmarks and listed buildings and can affect archaeological remains.

The City of London Local Plan aims for thorough protection of its cultural assets through a large number of policies that will protect and enhance the City's heritage and archaeological assets. These policies include: DM 11.1 – Protection of visitor, arts and cultural facilities; CS12 – Historic Environment; DM12.1 Managing change affecting all heritage assets and spaces; DM 12.2 Development in conservation areas; DM 12.3 Listed buildings; DM 12.4 Ancient monuments and archaeology and DM 12.5 Historic parks and gardens.

The implementation of the SPD may add further protection to these assets through its aims and measures, such as the reduction in road traffic however, it may also adversely affect the setting of some heritage assets in the location of consolidation centres which are not yet known. If the SPD were not to be implemented it is considered that more than adequate protection would still be afforded to the City's heritage and archaeological assets through policies within the Local Plan as well as supporting documents such as Conservation Area Plans.

Air quality

The City has some of the highest levels of pollution in the country due to its location at the heart of London and the density of development. Levels of pollutants in the City such as sulphur dioxide, carbon monoxide and benzene have reduced over the past decade but levels of fine particulates (PM10) and nitrogen dioxide (NOx) remain high. For this reason the City of London is a designated AQMA. Exposure to these pollutants is considered to be a significant cause of ill health.

Much of the air pollution in the City is associated with traffic and the movement of freight particularly, and so a reduction should be sought.

The City of London Local Plan sets out a policy to improve air quality in the City, Policy DM 15.6 – Air quality, as well as some of those policies set out in the climatic factors issue. There are also policies in the Local Plan which address traffic reductions and shift to more sustainable modes of transport. This includes policies CS16 – Public transport streets and walkways, DM 16.1 - Transport impacts of development, DM 16.4 – Facilities to encourage active travel, and DM 16.8 – River transport.

The implementation of the SPD offers an opportunity to further improve air quality in the City through the reduction in traffic and congestion. As stated in the climate impacts section air quality around the proposed consolidation centres may decline as a result and so this will need to be considered. Although it is considered that the issue of air quality is addressed in the Local Plan, the SPD would lend further measures and support to this and ensure that freight and surviving does not contribute to a decline in air quality. In terms of a reduction in traffic the Local Plan sets out a number of policies to this effect and it is considered that the Freight and Servicing SPD would lend further support to these policies in the reduction in traffic and congestion and a decrease in pollution. In the absence of the SPD the policies in the Local Plan will work towards this reduction with support from forthcoming GLA policies such as the Ultra Low Emissions Zone. The SPD will further support these measures.

Population and human health

Consideration of health for the City must take account of the health of the resident, working and visitor populations. Therefore the City must be designed to encourage healthy lifestyles through the provision of facilities for walking and cycling as well as improving safety for pedestrians and cyclists and improving air quality. Policies relating to the health of the population are set out in the Local Plan and include those set out above in 'Air quality' to encourage and facilitate active travel and also: CS19 – Open spaces and recreation; DM 19.3 – Sport and recreation and CS22 – Social infrastructure and opportunities.

The SPD has the potential to further improve the health of City residents' through the reduction in road traffic, congestion and air pollution, ensuring that the City is an attractive, healthy environment for recreation and the noise associated with servicing is minimised. However, the adverse effects of night time and weekend deliveries will also need to be considered. Without the implementation of the SPD health targets will still be in place but the effects of air quality may be more of a barrier to meeting these, along with road traffic and noise pollution.

Material assets / waste

The high rate of redevelopment in the City means that large quantities of demolition and construction waste are generated. The constricted nature of the City and the tight timescales involved in redevelopment mean that most of this demolition waste is transported off site for either recycling or disposal.

The Local Plan includes a number of policies for the reduction in demolition and construction waste and transport, these include: DM 17.1 - Provision for waste in development schemes; DM 17.2 - Designing out construction waste; DM 17.3 - New waste management sites and DM 17.4 Development affecting waste management sites.

Although the Local Plan includes policies aimed at reducing demolition and construction waste, the implementation of the Freight and Servicing SPD will further support the high rate of redevelopment and the sustainable movement of demolition and construction waste through improvements in efficiency and consolidation. The proposed use of consolidation centres outside of the City, and the possible increase in river traffic will also have to be considered. Without the measures in the SPD to reduce the transport impacts of waste, policies are still in place but it is considered that the SPD lends further support and weight to these, making outcomes more achievable.

The City of London transports waste for some local authorities and companies who operate their own waste management and recycling schemes using private contractors. Also, in addition to the Municipal waste management in the city a large number of private waste contractors operate in the City collecting waste from commercial premises. The Defra Commercial and Industrial Waste Survey 2009 estimates that the City generates 206,000 tonnes of commercial waste per annum. The City has no waste management sites so all waste has to be transported elsewhere.

There are policies in the Local Plan that address the need to minimise waste and the transport of waste in the City, including CS17 – Waste; DM 17.3 - New waste management sites; DM 17.4 – Development affecting waste management sites and DM 17.1 Provision for waste in development schemes.

The SPD sets out measures for a reduction in the number of delivery and servicing vehicles including waste collection vehicles through improvements in efficiency, on site waste management measures and the use of consolidation centres. It therefore would aid in the reduction of and effective and efficient removal of waste. In the absence of the SPD it is considered that waste collection and removal may continue as it is at present with large numbers of servicing vehicles on the City's roads.

4 SEA Findings for the SPD Options

- 4.1 This chapter presents the SEA findings for the selected options and reasonable alternative options that have been considered by the City of London for inclusion in the Freight and Servicing Supplementary Planning Document.
- 4.2 A total of three selected options and nine reasonable alternative options have been subject to SEA by LUC on behalf of the City of London for the Freight and Servicing SPD.
- 4.3 The likely effects of the three selected options included in the SPD and reasonable alternative options are summarised below in relation to each SEA objective. Particular consideration has been given to the likely significant effects identified (both positive and negative), in line with the requirements of the SEA Regulations. All effects are assumed to be long term unless otherwise specified. Consideration is also given to potential mitigation measures that could reduce or offset the negative effects identified.
- 4.4 Although the assessment of likely significant effects has focussed on the measures within each of the three selected options (minimise, match and mitigate), any new measures that are contained within section 5 of the SPD, which focuses on particular types of development, have also been considered in relation to each of the SEA objectives under the relevant selected option.
- 4.5 The SEA scores for all of the measures are presented in **Table 4.4** at the end of this chapter for ease of comparison.

Minimise Freight and Servicing Trips

4.6 The aim of this option is to reduce the number of delivery and servicing trips generated by premises in the City – including personal deliveries and waste collections.

SEA1: Improve air quality

- 4.7 The selected option includes a measure setting out the need for Delivery and Servicing Plans to include measures that use appropriate joint procurement to reduce the numbers of delivery and servicing trips required to premises. A decrease in the number of delivery and servicing trips will have a positive effect on air quality through the reduction in the number of vehicles using the roads in the City and the subsequent reduction in congestion and decrease in vehicle emissions.
- 4.8 Suppliers are encouraged to require the use of out of town consolidation centres in suitable locations within Greater London, to minimise the number of trips required to service premises within the City. In line with London Plan Policy 2.17, where an out of town consolidation centre is proposed, a facility in a designated Preferred Industrial Location (PIL) may be most suitable. It is considered that out of town consolidation centres are likely to have a positive effect on air quality in the City itself as they will work to reduce the number of delivery and servicing vehicles required to enter the City, resulting in a decrease in congestion and vehicle emissions. However, while there is likely to be a positive effect within the City, outside of the City, around the locations of the consolidation centres, the effects on air pollution are likely to be negative. It is probable that the roads in the vicinity of the consolidation centres will experience an increase in traffic as large numbers of vehicles access the site and vehicles are re-routed there. The increase in traffic is anticipated to lead to an increase in emissions and, depending on the nature of the roads in the area an increase in congestion, thereby having an adverse effect on air quality in these areas. The City Corporation have clarified that, for consolidation centres to become operational developers will need to identify potential sites outside the City (preferably in PILs) and apply to the relevant planning authority for planning permission. Therefore, responsibility for the implementation of the centres does not lie with the City. Because of this the exact location of the consolidation centres is not known, neither are any operating procedures, and therefore there is some uncertainty regarding any location / operational specific effects. However, as described

- above, Policy 2.17 of the London Plan points to 'Preferred Industrial Locations'. The siting of consolidation centres in industrial locations is not likely to significantly reduce the vehicle emissions or reduce the adverse effect of air quality on the environment, but the impact of any decline in air quality may not be so significant in regards to the surrounding population compared to locating the consolidation centre in a residential area. This is discussed further with regards to SEA4: health below.
- 4.9 The option also considers a system of micro consolidation within the City which would enable the last mile of deliveries to be undertaken by foot or cycle. Using foot or cycle to transport goods would result in positive effects on air quality as it is anticipated that these will replace vehicle trips thus reducing vehicle numbers, congestion and emissions. As with the out of town consolidation centres described above, the locations of micro consolidation centres and the number of vehicle trips that they would be expected to attract is unknown at this stage and therefore there is some uncertainty around any effects that these may have on local air quality. The implementation and siting of these centres would be in the City Corporation's control. It may be that, as with the larger consolidation centres, vehicle trips around the micro consolidation centres are increased leading to a reduction in air quality in the vicinity. On the other hand the a micro consolidation centres may only attract those delivery and servicing vehicles re-routed from office buildings and would therefore result in no adverse effects.
- 4.10 The 'minimise' option also sets out the need to prohibit personal deliveries, particularly those associated with online shopping. Instead, staff could be provided with access to a click and collect parcel drop-off service. In regards to accommodation, the promotion and use of central delivery points where all residents can collect goods that have been delivered is encouraged. This measure will work to reduce the number of delivery vehicles that access the premises and therefore will result in positive effects on air quality through the reduction in the number of vehicles on the City's roads and the consequent reduction in vehicle emissions.
- 4.11 Use of the river to transport goods and waste is promoted as a measure in this option.

 Agreements with waste management companies to make use of the waste transfer facilities at Walbrook Wharf are encouraged. The use of the river to transport goods and waste will remove traffic from the roads within the City. However, it is anticipated that the effects on air quality will be negligible as Policies CS9 and DM16.8 of the City of London Local Plan encourage the use of the river for waterbourne freight traffic. As such increases in river traffic as a result of the SPD will be negligible.
- 4.12 The provision of on-site or shared storage is encouraged to reduce the need for frequent delivery of non-perishable items. Smaller sites where storage is limited are encouraged to make arrangements to share storage space with neighbouring properties. This measure will work to reduce the number of deliveries that are required for each premises and so it is anticipated to have a positive effect on air quality through the reduction of road traffic and therefore vehicle emissions.
- 4.13 A measure is included that encourages the on-site waste management of all possible materials, including waste generated through construction and deconstruction which should be re-used and recycled on site wherever possible. The aim of this measure is to result in the minimum possible frequency of waste and recycling collection. This measure is expected to have positive effects on air quality by reducing the number of servicing vehicles on the roads in the City, which will subsequently reduce congestion and vehicle emissions.
- 4.14 As described in paragraph 4.5, any new measures that are included in the sections of the SPD regarding particular types of development have also been assessed. A measure has been added regarding general retail, which promotes the co-ordination of goods into the store and waste / returns from the store. Ensuring that vehicles used for deliveries are also loaded with returns or waste, where appropriate, maximises efficiency and reduces the number of vehicles that are required to service a development. This measure will therefore have positive effects on air quality as the reduction in the number of vehicles will lead to a decrease in emissions.
- 4.15 Section 6 of the SPD sets out the requirement for all major developments to submit a Construction Logistics Plan (CLP). The aim of a CLP is to reduce the impact of construction traffic on the road network. The need for a CLP and what should be included is not described in detail in the SPD. However, in reducing the impact of traffic on the road network it is anticipated that the production of a CLP will have a positive effect on air quality.

4.16 The option is likely to have significant positive effects on air quality resulting from many of the measures, particularly within the City of London. However, it is also likely to result in significant negative effects on air quality in specific locations outside the City of London due to the use of out of town consolidation centres, although this is uncertain. Therefore this option has been given a score of mixed effects with potential uncertain positive and significant negative effects (++/--?) in regards to SEA1: improve air quality.

SEA2: Reduce activities that exacerbate climate change

- 4.17 The need for a Delivery and Servicing Plan (DSP) to include measures that use appropriate joint procurement to reduce the numbers of delivery and servicing trips required to premises will have a positive effect on climate change. This is through the reduction in the number of vehicles using the roads and also the subsequent reduction in congestion and decrease in vehicle emissions.
- 4.18 The measure that encourages the requirement to use consolidation centres in suitable locations within Greater London, to minimise the number of trips required to service premises within the City, is likely to have a positive effect on climate change. This is because the use of the centres will result in an overall reduction in the number of delivery and servicing vehicles on the road and consequently there will be a decrease in congestion and emissions that contribute to climate change.
- 4.19 A system of micro consolidation within the City, which would enable the last mile of deliveries to be undertaken by foot or cycle, is also considered to have positive effects on climate change. Using foot or cycle to transport goods would result in positive effects as it is anticipated that these modes will replace vehicle trips thus reducing vehicle numbers, congestion and emissions.
- 4.20 The encouragement to prohibit personal deliveries, and the use of click and collect or central delivery points will work to reduce the number of delivery vehicles that access the premises and therefore will result in positive effects on climate change through the reduction in the number of vehicles on the roads and the consequent reduction in vehicle emissions.
- 4.21 Use of the river to transport goods and waste is promoted in this selected option. Agreements with waste management companies to make use of the waste transfer facilities at Walbrook Wharf are encouraged. The use of the river to transport goods and waste will remove traffic from the roads within the City. However, it is anticipated that the effects on climate change will be negligible as Policies CS9 and DM16.8 of the City of London Local Plan already encourages the use of the river for waterbourne freight traffic. As such increases in river traffic as a result of the SPD will be negligible.
- 4.22 The provision of on-site or shared storage is also encouraged within this option to reduce the need for frequent delivery of non-perishable items. Smaller sites where storage is limited are encouraged to make arrangements to share storage space with neighbouring properties. This measure will work to reduce the number of deliveries that are required for each premises and so it is anticipated to have a positive effect on climate change through the reduction of road traffic and therefore vehicle emissions.
- 4.23 This option encourages the on-site waste management of all possible materials. The aim of this measure is for premises to require the minimum possible frequency of waste and recycling collection. Therefore, this measure is expected to have positive effects on climate change by reducing the number of servicing vehicles on the roads, which will subsequently reduce congestion and vehicle emissions.
- 4.24 A further measure has been included in section 5 of the SPD regarding general retail, which encourages the co-ordination of goods into the store and waste / returns from the store. Ensuring that vehicles used for deliveries are also loaded with returns or waste, where appropriate maximises efficiency and reduces the number of vehicles that are required to service a development. This measure will therefore have positive effects on climate change as the reduction in the number of vehicles will lead to a decrease in vehicle emissions.
- 4.25 Section 6 of the SPD sets out the requirement for all major developments to submit a Construction Logistics Plan (CLP). The aim of a CLP is to reduce the impact of construction traffic on the transport network. What should be included within a CLP is not described in detail in the SPD however, in reducing the impact of traffic on the road network it is anticipated that the production of a CLP will have a positive effect on climate change.

4.26 Considering the above, this option is given a significant positive effect score (++) against SEA2: climate change.

SEA3: Adopt the 'Waste hierarchy' in all activities - reduce, reuse, recycle

- 4.27 The use of a DSP to encourage joint procurement may have positive effects on waste in the City if the joint procurement is in relation to waste collection and therefore leads to a reduction in the number of waste collection trips generated by premises in the City.
- 4.28 The use of both large (out of town) and micro consolidation centres is not anticipated to significantly affect waste within the City or in the areas around the location of any out of town consolidation centre. This is because the consolidation centres are not expected to be used for the storage or collection of waste and will not affect the generation of waste. Instead the centres are expected to be used for goods going into and coming out of the City.
- 4.29 The measure that encourages the prohibition of personal deliveries is also not expected to have any significant effects on waste as this does not influence waste generation or disposal.
- 4.30 The measure that encourages the use of the river to transport goods, and specifically the use of Walbrook Wharf to provide a means of removing commercial waste from the City with minimal use of the road network, is expected to have a negligible impact on waste, as Policies CS9 and DM16.8 of the City of London Local Plan both encourage the use of the river for waterbourne freight traffic. As such, increases in the use of the river for the movement of waste as a result of the SPD will be negligible.
- 4.31 The option encourages the use of on-site or shared storage to reduce the need for frequent deliveries and servicing. If the on-site or shared storage was used for the consolidation and storage of waste which would subsequently reduce the number of waste collections that are required then this measure would be expected to have a positive effect on waste.
- 4.32 The above measures will work to reduce the number of waste collections and thus vehicle trips that are required for premises in the City. The benefits of a reduction in vehicle trips are described in more detail in the SEA1: air quality and SEA2: climate change sections above.
- 4.33 This option also encourages the on-site waste management of all possible materials, including waste generated through construction and deconstruction which should be re-used and recycled on site wherever possible. The aim of this measure is for premises to require the minimum possible frequency of waste and recycling collection through the reduction in the amount of waste produced. This measure is expected to have significant positive effects on waste in the City through the promotion or re-use and recycling and the ultimate reduction in the volume of waste produced by each premises. This will also lead to further positive effects arising from a reduction in the number of waste collection trips required.
- 4.34 A further measure has been included in section 5 of the SPD regarding general retail, which encourages the consolidation of goods into the store and waste / returns from the store. Ensuring that vehicles used for deliveries are also loaded with returns or waste, where appropriate maximises efficiency and potentially reduces the number of waste collection vehicles that are required to service a development. This measure will therefore have a positive effect on waste through a reduction in the number of waste collection trips required. As previously stated this will also benefit air quality and climate change as described in the relevant sections above.
- 4.35 The SPD also sets out the need for all major developments, that will have a significant impact on the transport network to prepare a Construction Logistics Plan, the aim of which will be to reduce the impact of the development on the transport network. Although the details of what a CLP should include are not included in the SPD the CLP may address the minimisation and transport of waste and in line with the aim of reducing impact it is anticipated that the effects of this on waste will be positive, although this is uncertain.
- 4.36 In line with the above, as a number of measures will work to reduce the amount of waste generated and ensure that the number of waste related trips is reduced, this option is given a score of significant positive score (++) in regards to SEA3: waste.

SEA4: Improve the health of City workers, residents and visitors

- 4.37 The measure within this option that promotes joint procurement to reduce the number of deliveries and servicing trips required for premises in the City is anticipated to have a positive effect on the health of the City's population. This is due to a reduction in the number of vehicles on the roads, leading to both improvements in air quality and safety for cyclists and pedestrians, and a reduction in noise pollution, improving amenity for residents and workers.
- Similarly, it is expected that the use of out of town consolidation centres will have a positive effect 4.38 on the Health of the City's population as they will lead to a reduction in vehicles numbers and subsequently improvements in safety, air quality and noise and light pollution within the City. The use of consolidation centres will reduce the total number of vehicle miles and therefore residents along the route from major roads to the City are likely to experience fewer vehicles passing through and so will also experience improvements in safety, air quality and amenity. However, it is considered that there may also be adverse effects on residents outside the City who live in close proximity to the consolidation centres themselves or potential routes to the centres. As it is likely that there will be an increase in traffic around the consolidation centres, it is anticipated that there will also be some decline in local air quality as well as increases in noise and light pollution, as well as potential safety issues associated with a high number of large delivery vehicles using roads alongside cyclists and pedestrians. As described in the 'air quality' section however, the City does not have control over the development of the consolidation centres, their location or operation and therefore, the effects are uncertain. It is likely that the centres will be located in Preferred Industrial Locations in line with London Plan policy 2.17, which would reduce health impacts as fewer people are likely to live in the vicinity of PILs.
- 4.39 The use of micro consolidation centres within the City is likely to have positive effects on health for the same reasons as for the larger consolidation centres above. Using foot or cycle for the transport of goods will both reduce traffic on the roads thus improving safety, air quality and noise pollution. It is not at this stage known whether the micro consolidation centres will attract more vehicles to a building than it would experience currently. If this is the case then there may be reductions in air quality safety issues and amenity issues in the vicinity of a micro consolidation centre.
- 4.40 The prohibition of personal deliveries to staff in offices and the promotion of central delivery points for residents, as well as the provision of adequate on site or shared storage and the onsite storage and management of waste, will work to reduce the number of delivery and servicing vehicles using the roads in the City. These measures will result in a positive effect on health through improvements in air quality, reduction in noise pollution and improvements in road safety for pedestrians and cyclists.
- 4.41 The measure that encourages the use of the river to transport goods and waste is anticipated to move some trips from the City's roads to the river. However, it is expected to have a negligible impact on health as Policies CS9 and DM16.8 of the City of London Local Plan both encourage the use of the river for waterbourne freight traffic. As such, increases in the use of the river for freight movement as a result of the SPD will be negligible.
- 4.42 Section 5 of the SPD describes measures for different types of development. A further measure has been included for general retail use which encourages the consolidation for goods into the store and returns from the store. This will maximise efficiency and minimise the number of vehicles that are required to service a store meaning, as with the above measures there will be a positive impact on human health due to a reduction in traffic, as described above.
- 4.43 It is anticipated that the use of Construction Logistics Plans, the aim of which is to reduce impact on the transport network through a reduction in the number of vehicles required, will also have positive effects on human health by reducing construction traffic within the City.
- 4.44 Based on the measures above, the selected option is given a mixed score with uncertainty (+/-?) in relation to SEA4: Health. The option has received a mixed effect score as many of the measures will have beneficial effects on health though improved safety, amenity and air quality however, there is uncertainty, and probable negative effects on health associated with the use of consolidation centres.

SEA5: Conserve and enhance the historic environment

- 4.45 It is not anticipated that the use of joint procurement will have any significant effects on heritage assets within the City. Minor positive effects may arise as a result in the reduction of road traffic, which may work to enhance the setting of heritage assets.
- The effect of the measure which encourages the requirement for suppliers to use out of town consolidation centres is uncertain, as it is dependent on the location of and routing to the potential centres, which is not currently known or in the control of the City as explained in the SEA1 air quality section. Historic England have flagged up a number of areas around the City with high numbers of heritage assets, these include: Shoreditch, Bethnal Green Road / Redchurch Street, Whitechapel and Aldgate. While it is unlikely that a consolidation centre will be located in these areas and in the vicinity of a heritage asset (due to policy 2.17 in the London Plan which states that 'a facility in a preferred industrial location may be most suitable'), it is accepted that any increased traffic and pollution around a heritage asset as a result of routing to and from a consolidation centre may lead to adverse effects on its setting or character. In the City itself, however, it is anticipated that the use of consolidation centres will have a positive effect on heritage assets through a reduction in traffic and as a result an enhancement to the setting of heritage assets.
- 4.47 Similarly, the location of micro consolidation centres is not known, and the number of vehicles a micro consolidation centre may attract is also uncertain. If a micro consolidation centre were to be located near to a heritage asset and would attract more vehicles to the area than at present, then the setting or character of any nearby heritage assets may be adversely affected. However, the measure focusses on the use of foot and cycle when carrying out deliveries, which will result in a reduction in the number of vehicles using the roads in the City resulting in positive effects on the setting of heritage assets.
- 4.48 The measures to encourage a reduction in personal deliveries, the use of on-site or shared storage and on site waste management will all work to reduce the number of servicing and delivery vehicles using the roads in the City. It is not anticipated that this will lead to any significant effects on heritage assets. However, there may be some minor positive effects on the setting of heritage assets due to a decrease in vehicle movements with the City.
- 4.49 The measure that encourages the use of the river to transport goods and waste is anticipated to move some trips from the City's roads to the river. However, it is expected to have a negligible impact on the historic environment as Policies CS9 and DM16.8 of the City of London Local Plan both encourage the use of the river for waterbourne freight traffic. As such, increases in the use of the river for freight movement as a result of the SPD will be negligible.
- 4.50 The measure that relates to general retail use to consolidate goods coming into a store and returns / waste from the store will also work to reduce the number of vehicles using the roads in the City and enhance the settings of heritage assets.
- 4.51 The implementation of a Construction Logistics Plan will reduce the impact of a major development on the transport network. It is envisaged that a CLP will not have significant effects on heritage assets in the City, but may assist in the maintenance of the character and setting of heritage assets that may otherwise be negatively affected.
- 4.52 In consideration of the above this option has been scored with uncertain mixed effects (+/-?) in regards to SEA5: conserve and enhance the historic environment. This score results from the likely reduction in traffic in the City, which would enhance the settings of heritage assets, but also the potential negative effects that may arise in the event that a consolidation centre or routing to / from a centre is located within proximity to a heritage asset. There is uncertainty in the score as the locations of and routing to and from any consolidation centres is unknown and so it is uncertain whether there would be heritage assets in the areas affected.

Mitigation

4.53 It is considered that the mitigation required for this selected option will only be necessary in regards to the negative effects associated with the use of consolidation centres. This measure is the only one that is likely to result in significant negative effects.

- 4.54 It is anticipated that the below measures would help to mitigate any adverse impacts resulting from the use of consolidation centres:
 - Ensuring as far as possible that, in line with Policy 2.17 of the London Plan, consolidation centres are located in preferred industrial locations and are not located in areas that would; affect the character or setting of a heritage asset, affect local residents or affect any sensitive receptors such as schools or hospitals.
 - When routing traffic to consolidation centres ensure that this is along appropriate roads, i.e.
 those large enough to accommodate larger delivery vehicles, those with minimal residential
 development and those that will not lead to an adverse effect on the setting of a heritage
 asset. A transport plan could be produced for the consolidation centre which sets out which
 routes should be used.
 - If the consolidation centre is to be located in a more residential area or an area frequently used by the public, ensure that it is screened from view, sensitive lighting is used, noise is minimised and if the area if residential then the centre is only operational during the daytime, when most residents are likely to be at work and their sleep will not be disturbed. Again this could be set out in a transport plan. However, as the centres would be outside the administration of the City Corporation this acts as a recommendation to developers when considering the design of consolidation centres.
 - As far as possible use a booking system or delivery timing system to reduce the possibility of
 congestion and subsequent local air quality issues. To reduce the adverse effects on air
 quality and climate change, the use of low or zero emission delivery vehicles should be
 encouraged.

Reasonable alternatives

- 4.55 Four reasonable alternative options have been put forward by the City Corporation. While the selected option assessed above contains most of the measures that are included below as alternative options, the alternative options have been assessed as focussed measures that would be implemented in isolation.
- 4.56 Reasonable Alternative 1 Retain businesses as usual, whereby the number of deliveries allowed per day can be restricted to a number that will make the application operationally acceptable in planning terms. It is considered that this alternative option will have no significant effects on the SEA objectives above as it is not proposing any changes to the current situation. The scores for this option against all SEA objectives will therefore be negligible.
- 4.57 Reasonable Alternative 2 Require the use of physical consolidation centres located outside the City for all deliveries to and from the site. The site will be accessed via suitable routes. As described in the sections above the effects of consolidation centres are anticipated to beneficial to the City itself due to a reduction in traffic. However, the effects on the areas around the consolidation centres, which are not currently known, are more uncertain and it is likely that there will be some significant negative effects resulting from an increase in traffic, noise and air pollution. The scores for this alternative option in relation to the SEA objectives can be seen in **Table 4.1**.
- 4.58 Reasonable Alternative 3 Require use of a micro-consolidation centre, which may be located within or outside the City boundary, for all deliveries to the site. The last mile delivery between the micro-consolidation centre and the site must be made by zero-emission means. It is expected that this alternative option will have positive effects on the SEA objectives arising from a reduction in traffic and the promotion of zero emission transport. However, as with the option above there are also uncertain effects surrounding the location of the micro consolidation centres, which are unknown. It is not certain whether the micro consolidation centres will attract an increase in vehicles on a local level, which could result in adverse effect on the local area. The scores for this option are presented in **Table 4.1**.
- 4.59 Reasonable Alternative 4 Require the consolidation of all waste on-site prior to collection, with the promotion of 'reverse consolidation' whereby delivery vehicles will take away as much waste as possible. This alternative option is anticipated to have positive effects on all SEA objectives as it will result in both a decrease in the amount of waste produced and a reduction in the number of servicing trips that a premises requires, thus reducing the number of vehicles on the roads. The

scores for this option in relation to the SEA objectives are included in the table below. It is recognised that this alternative may not be available to sites that cannot accommodate on site consolidation.

Table 4.1 Summary of scores

	SEA objective						
		SEA1: Air Quality	SEA2: Climate Change	SEA3: Waste	SEA4: Health	SEA5: Historic Environment	
Measure or reasonable alternative	Minimise freight and servicing trips	++/?	++	++	+/-?	+/-?	
	Alternative 1 Retain business as usual	0	0	0	0	0	
	Alternative 2Require the use of consolidation centres	+/?	+	0	+/-	+/-?	
	Alternative 3 Require use of micro consolidation and last mile zero emissions	+/-?	+	0	+/-	+/-?	
	Alternative 4 Require waste consolidation	+	+	++	+	+	

Match Demand to Network Capacity

4.60 The aim of this selected option is to maximise the proportion of essential delivery and servicing trips taking place outside peak times and where possible promote quiet evening or night time deliveries. All essential delivery and servicing trips should be routed appropriately, using streets that are suitable for the vehicle being used, and minimising noise, emissions and road danger along the length of the route.

SEA1: Improve air quality

4.61 The second selected option, 'match', sets out the need for deliveries and servicing to take place on a weekend, evening or at night time, and for these to be subject to a quiet delivery agreement or commitment to minimise noise or pollution impacts, including along delivery routes and any consolidation centres. This measure is anticipated to have a positive effect on air quality as timing delivery and servicing trips for evenings or weekends will take trips off the roads at the busiest times and will therefore reduce congestion and subsequently vehicle emissions.

- 4.62 The second measure for this option states that where daytime deliveries are essential these should take place at off peak times (i.e. avoiding 7-10am, 12-2pm and 4-7pm) with a booking system used to ensure that deliveries and servicing are restricted to these times. As with the measure described above, this will reduce the number of vehicles on the roads at peak times, thus reducing congestion and vehicle emissions. Therefore, this measure is expected to have a positive impact on air quality.
- 4.63 The need for appropriate routes to be used by drivers both within the City and at all stages of their journey is also included as a measure within this option. Where possible, routes will avoid areas of high pedestrian or cycle use and residential areas. This measure may result in improvements in air quality if the routes chosen are also those that minimise the impact of the delivery and servicing vehicles on congestion, for example. Otherwise, the measure is not anticipated to have any effects on air quality.
- 4.64 Based on the above this selected option has been scored as having minor positive (+) effects in relation to SEA1: improve air quality, as although the measures will not reduce vehicle trips, they will work to take vehicles off the roads at peak times, thus reducing the potential for congestion and resulting emissions.

SEA2: Reduce activities that exacerbate climate change

- 4.65 As with SEA1: improve air quality, it is anticipated that deliveries taking place at a weekend, evening or at night time will have a positive impact on climate change. This is for the same reasons as above, namely reducing the number of vehicles on the roads in the City at the busiest times and the subsequent reduction in congestion and vehicle emissions.
- 4.66 The second measure, which requires any essential daytime deliveries to take place at off peak times and for this to be ensured through the use of a booking system, will have similar effects to the first measure in that it will result in fewer vehicles being on the roads at peak times.

 Therefore, this measure is also expected to have a positive impact on climate change.
- 4.67 The use of appropriate routes within the City and at all other stages of the journey which avoid areas of high pedestrian and cycle use and also residential areas could have a positive effect on climate change through the reduction in vehicle emissions if the routes are also chosen to minimise the possibility of congestion. Otherwise the measure is unlikely to have any effects.
- 4.68 This selected option has been scored minor positive (+) in relation to SEA2: climate change, as the likely reduction in daytime congestion will result in a decrease in vehicle emissions.

SEA3: Adopt the 'Waste hierarchy' in all activities - reduce, reuse, recycle

- 4.69 It is not anticipated that moving the times of deliveries to off peak (be it weekend, evening, night time or daytime off peak) will have any effect on waste.
- 4.70 Similarly, the use of appropriate routes within the City and along the route, that avoid residential areas and those of high pedestrian and cycle use, is not expected to have any effect on waste.
- 4.71 This option has been given a negligible score (0) in relation to SEA3: waste, as it is not anticipated that any of the measures will have an effect on the generation or processing of waste.

SEA4: Improve the health of City workers, residents and visitors

- 4.72 The measure that requires deliveries to be undertaken on a weekend, during the evening or night time and subjects these to a quiet delivery agreement or commitment to minimise noise and pollution at all stages of the delivery process, is anticipated to have positive effects on health. This is as a result of reducing the volume of traffic, and importantly large vehicles, on the roads at the busiest times, thus increasing safety for pedestrians and cyclists, and also reducing congestion and subsequently improving air quality. However, weekend, night time and evening deliveries could also adversely affect human health in regards to amenity, as this could lead to noise and light pollution at antisocial hours. While a commitment to minimise noise and pollution should mitigate some of these effects it is still considered that the effect of this measure is likely to be mixed with both positive and negative effects arising.
- 4.73 Ensuring that essential daytime deliveries occur at off peak times is also anticipated to have a positive effect on health. By reducing the number of large vehicles using the roads at peak times

- safety for pedestrians and cyclists will be improved. Congestion will also be reduced leading to improved air quality and subsequent benefits to human health. This measure is not likely to lead to changes in noise or light pollution that would affect human health.
- 4.74 The use of appropriate routes within the City and at all stages of the journey is expected to have a positive impact on human health. This is because the measure states that where possible routes should be chosen to avoid areas of high pedestrian and cycle use, meaning that these areas will become safer for pedestrians and cyclists and congestion along these routes will also be minimised leading to improvements in air quality. Routes will also aim to avoid residential areas meaning that disturbance to residents by noise or light pollution will be minimised.
- 4.75 In line with the above this selected option is assessed as having mixed positive and negative effects (+/-). This is because the reduction in the number of vehicles, particularly large vehicles, along roads at peak times and along roads used by a high volume of pedestrians and cyclists is likely to have positive effects in terms of congestion and therefore air quality and safety. However, it is also recognized that a shift in deliveries and servicing to the weekend, evening and night time may have an adverse effect on amenity in terms of noise and light pollution for residents.

SEA5: Conserve and enhance the historic environment

- 4.76 Requiring deliveries to be undertaken on the weekends, in the evening or at night time, as well as requiring essential daytime deliveries to occur at off peak times (i.e. avoiding 7-10am, 12-2pm and 4-7pm) is anticipated to have minor positive effects on the historic environment. This is because these measures will work to reduce traffic on the roads at the busiest times and reduce congestion which is likely to enhance the settings of any heritage assets in the City located along frequent delivery and servicing routes.
- 4.77 The use of appropriate routes in the City and at all stages of the journey that avoid residential areas and areas of high pedestrian and cycle use is not expected to have an effect on the historic environment, unless the routes that are avoided also contain heritage assets that could benefit from improvements to setting through the reduction in traffic. If the selected routes will lead to an increase in delivery and servicing vehicles in the vicinity of heritage assets, the settings of these assets could be harmed by an increase in traffic. As the routes are unknown the effect is uncertain.
- 4.78 Based on the above this selected option is scored minor positive uncertain (+?) in regards to SEA5: historic environment. This is because of the likely positive effects a reduction in traffic on the roads in the City will have on the setting of heritage assets with some uncertainty surrounding the actual routes that would be selected.

Mitigation

- 4.79 It is considered that mitigation for this selected option may be required in terms of noise and light pollution occurring from evening, night time and weekend deliveries, leading to a loss of amenity for residents living along the route. Mitigation is already included in the SPD and is described below.
- 4.80 One of the measures in the SPD states that 'All deliveries requiring activity outside working hours, either at the site in the City or elsewhere in the delivery chain, should be subject to a quiet delivery agreement or commitment to minimise noise and pollution impacts at all stages of the delivery process, including along the delivery route and at any intermediary points such as a consolidation centre. Details of the delivery and servicing timings and how they will be managed to minimise noise impacts at all stages of the delivery process should be included in the DSP.'
- 4.81 The selected option also contains a measure requiring the use of appropriate routes that avoid residential areas, therefore minimising the impact of servicing and delivery vehicles on residents in regards to loss of amenity though noise and light pollution.
- 4.82 In addition to measures to mitigate a loss of amenity, any selected delivery and servicing routes that avoid areas of high pedestrian and cycle use as well as residential areas, should also aim to avoid heritage assets so as not to adversely affect their setting.

Reasonable alternatives

- 4.83 Three reasonable alternatives to the selected option were identified by the City Corporation. Whilst the selected option assessed above contains most of the measures that are included in the alternative options described below, the alternative options, which have been assessed below, are considered as focussed measures and have been considered in isolation.
- 4.84 Reasonable Alternative 1 Retain business as usual, whereby weekday quiet times overnight (11pm 7am) for residents are protected, along with Sunday and Bank Holidays. Deliveries by motor vehicle (except solo motorcycle) may be restricted at peak times to make an application operationally acceptable, (typically between 6-10am, 12-2pm and 5-7pm) but delivery windows of not less than two hours each (typically 10am-12pm and 2pm-4pm) would be available for deliveries. It is considered that this alternative option will have a negligible effect on all SEA objectives as it is not proposing any changes to the current arrangements and therefore does not represent a change to the baseline. The score therefore will be negligible (0), as recorded in **Table 4.2** below.
- A.85 Reasonable Alternative 2 Move to a full daytime restriction, with no deliveries permitted between 7am and 7pm on weekdays. It is expected that this alternative option will have a positive effect on air quality and climate change due to the reduction in the number of vehicles using the roads at the busiest times and a resultant reduction in vehicle emissions. It is also expected to have minor positive effects on the historic environment due to the reduction in traffic which is likely to enhance the settings of heritage assets. The effect on waste is considered to be negligible, while effects on health may be mixed as there is likely to be increases in safety and improvements in air quality, but off peak deliveries may lead to a loss of amenity for residents along selected routes. The scores against each objective are shown in **Table 4.2**.
- 4.86 Reasonable Alternative 3 Require all deliveries to take place overnight (i.e. between 11pm and 7am). This alternative is very similar to that above, but specifies later delivery times. It is expected therefore that the scores will be the same as those for Reasonable Alternative 2.

Table 4.2 Summary of scores

	SEA objective						
Measure or reasonable alternative		SEA1: Air Quality	SEA2: Climate Change	SEA3: Waste	SEA4: Health	SEA5: Historic Environment	
	Match demand to network capacity	+	+	0	+/-	+?	
	Alternative 1 Retain business as usual	0	0	0	0	0	
	Alternative 2 No deliveries between 7am-7pm	+	+	0	+/-	+	
	Alternative 3 Require night time deliveries 11pm-7am	+	+	0	+/-	+	

Mitigate the Impact of Freight Trips

4.87 The aim of this selected option is: where goods and services must be transported by road, including for the last mile, use the safest and quietest, zero emission means possible, which may mean moving goods or service personnel on foot or by cycle. The use of river or rail transport for the transfer of goods and waste is encouraged, but the impact of additional noise and pollution at all stages of the journey should be considered. Loading and unloading of goods should not adversely impact on highway capacity, pedestrian, cycle or vehicle movement, road or site safety or unwanted noise levels either in the City itself or on any stage of the journey.

SEA1: Improve air quality

- 4.88 This selected option includes a measure that encourages responsible procurement policies that prioritise suppliers that use zero or low emission vehicles, and vehicles that meet the forthcoming Ultra Low Emission Zone standards, to be a minimum requirement in any delivery or servicing contract. This measure is expected to have positive effects on air quality through the reduction in emissions the use of low emission vehicles is likely to result in.
- The second measure requires high standards of vehicle and driver competency from suppliers. The requirement for suppliers to be accredited by FORS⁹, which promotes good working practices as well as routing and scheduling in a way that minimises noise and environmental impact is encouraged, as is the use of Direct Vision vehicles, which provide the driver with an improved field of vision. For fleets serving construction sites adherence to the Construction Logistics and Community Safety standard, which aims to reduce work related risk, is encouraged. This measure is likely to have positive effects on air quality though more efficient driving, routing and scheduling, which are likely to result in a reduction congestion and subsequently in vehicles emissions.
- 4.90 The third measure states that the physical space in which goods are loaded and unloaded should be designed in accordance with the City of London's Highways and Servicing Guidance. Where on street loading is permitted measures should be put in place to ensure that the movement and safety of road users is not adversely affected. It is anticipated that this measure may have some minor positive effects in relation to air quality as, if vehicles carrying out deliveries or servicing on street are required to ensure that the movement of other road users is not affected then this will not cause congestion and any resulting increase in vehicle emissions.
- 4.91 Within section 5 of the SPD, an additional measure is added for food and drink retail / pubs and restaurant use. This measure sets out the need for engines to be turned off unless absolutely necessary for deliveries in order to reduce noise and air pollution. This is expected to have a positive effect on air quality as engines that are not left idle will not produce emissions.
- 4.92 Based on the above this selected option is scored significant positive (++) in relation to SEA1: air quality, as it is considered that these combined measures will have significant positive effects through the reduction in vehicle emissions.

SEA2: Reduce activities that exacerbate climate change

- 4.93 As with air quality, the use of low or zero emission vehicles is expected to have a positive effect on climate change through the reduction in vehicle emissions.
- 4.94 The measure that encourages high standards of vehicle and driver competency, as well as FORS accreditation, use of Direct Vision vehicles and adherence to the Construction Logistics and Community Safety standard, is anticipated to have positive effects on climate change through more efficient driving, routing and scheduling leading to a decrease in congestion and vehicle emissions.
- 4.95 The third measure states that the physical space in which goods are loaded and unloaded should be designed in accordance with the City of London's Highways and Servicing Guidance, and that if on street servicing is required the movement and safety of road users, and the amenity of

⁹ Fleet Operator Recognition Scheme, https://www.fors-online.org.uk/cms/

- residents should not be affected. As with air quality above it is anticipated that this measure will result in some minor positive effects for the same reasons.
- 4.96 Section 5 of the SPD includes an additional measure for food and drink retail / pubs and restaurant use which sets out the need for vehicle engines to be turned off when servicing or a delivery is taking place. This will work to reduce vehicle emissions and will therefore have positive effects on climate change.
- 4.97 As with SEA 1, this selected option is anticipated to have significant positive effects in regards to climate change for the reasons described above. Therefore, it has been given a significant positive score (++).

SEA3: Adopt the 'Waste hierarchy' in all activities - reduce, reuse, recycle

- 4.98 It is not expected that the measures included within this option (to encourage the use of low or zero emission vehicles, encourage high standards of vehicle or driver competency or set guidance for loading and unloading) will have any effect on waste. This is because these measures will not work to reduce the amount of waste generated and required to be transported on the roads in the City.
- 4.99 In line with the above information it is considered that this option will have a negligible effect on waste, as the measures are unlikely to affect the generation or processing of waste. Therefore this option has been given a negligible score (0) in regards to SEA 3: waste.

SEA4: Improve the health of City workers, residents and visitors

- 4.100 The measure that encourages the use of low or zero emission vehicles and those that meet the standards of the forthcoming Ultra Low Emission Zone is expected to have a positive impact on human health through the reduction in vehicle emissions and the subsequent improvement in air quality.
- 4.101 The second measure which encourages high standards of vehicle and driver competency, as well as FORS accreditation, use of Direct Vision vehicles and adherence to the Construction Logistics and Community Safety standard is expected to have positive effects on health. The requirement for suppliers to be accredited by FORS, which promotes good working practices, as well as routing and scheduling that minimises noise and environmental impacts, should reduce any impact on the amenity of residents, particularly in terms of noise disturbance, as well as working to reduce vehicle emissions. The use of Direct Vision vehicles and adherence to the Construction Logistics and Community Safety standard will ensure that the safety of other road users and construction site workers is enhanced thus having a beneficial effect on health.
- 4.102 The design of loading space in accordance with the City of London Highways and Servicing Guidance, and implementation of measures for on street servicing that ensure that the movement and safety of pedestrians, cyclists and other road users is not affected, will also have positive effects on health. This is because this measure ensures that servicing will not impact upon the safety of road users, particularly pedestrians and cyclists and will also reduce any impact (though noise or light pollution) on residential amenity.
- 4.103 The additional measure included in relation to food and drink / pub and restaurant use, which sets out the requirement for delivery and servicing vehicles to turn off engines where it is not necessary to leave them on, will have a beneficial effect on human health as it will reduce both noise pollution and vehicle emissions resulting from servicing and deliveries and will therefore enhance residential amenity and air quality which will have beneficial effects on health.
- 4.104 Based on the above reasons this selected option has been scored significant positive (++) in relation to SEA4: health as the measures are likely to result in significant improvements in air quality, safety and amenity.

SEA5: Conserve and enhance the historic environment

4.105 The measure that encourages the use of low and zero emission vehicles as well as the measure which sets out guidance for loading and unloading spaces are not expected to have any effect on the historic environment as it is not envisaged that these measures will affect the setting or the character of a heritage asset.

- 4.106 The measure regarding vehicle and driver competency, that encourages the requirement for suppliers to be accredited by FORS, as well as routing and scheduling that minimises noise and environmental impact, is likely to have positive effects on the historic environment as effective routing that minimises environmental impacts may avoid heritage assets thus enhancing their setting.
- 4.107 It is also considered that the measure included in relation to food and drink uses that encourages suppliers to switch off their engines could also positively impact the historic environment, particularly if servicing takes place in the vicinity of a heritage asset, as a reduction in noise pollution will enhance its setting and reduce the risk of erosion from pollution.
- 4.108 This selected option has been scored minor positive uncertain (+?) in relation to SEA5: historic environment due to the enhancements the measures may have on the setting of heritage assets though the reduction in the amount of traffic and noise pollution.

Mitigation

- 4.109 As it is not anticipated that there will be any significant adverse effects on the SEA objectives as a result of this selected option, no mitigation is required.
- 4.110 However, to further lessen the environmental impacts it is recommended that the additional measure included in Section 5 of the SPD, which sets out the need for engines to be turned off unless absolutely necessary for deliveries at food and drink retail / pubs, should be expanded to include other uses, for example offices and other general retail.

Reasonable alternatives

- 4.111 Two reasonable alternatives to the selected option have been put forward by the City Corporation. While the selected option assessed in detail above contains most of the measures that are included below in the alternative options, the two alternative options assessed should be considered as focussed measures and assessed in isolation. They will therefore score differently.
- 4.112 Alternative 1 Retain business as usual, whereby the environmental impact of servicing is required to be minimised with no formal restriction on the type of vehicle used. Note that mayoral policies (T charge and Ultra Low Emission Zone) will, in future, levy charges upon less clean motor vehicles entering central London. This alternative option is expected to have a negligible impact on all of the SEA objectives as it is not proposing a change to the current situation. The option will therefore score 0 against all SEA objectives.
- 4.113 Alternative 2 Require the use of zero-emission vehicles to be used at the point of delivery to the site in the City. It is anticipated that this option will have significant positive effects on both air quality (SEA1) and climate change (SEA2) through the reduction in vehicle emissions. The impact on waste (SEA3) and the historic environment (SEA5) is expected to be negligible as this option will neither effect the generation of waste or the setting or character of a heritage asset. The effect on health (SEA4) is anticipated to be positive, again due to a reduction in vehicle emissions and an associated improvement in air quality.

Table 4.3 Summary of scores

			SEA obj	ective		
tive		SEA1: Air Quality	SEA2: Climate Change	SEA3: Waste	SEA4: Health	SEA5: Historic Environment
le alterna	Mitigate the impact of freight trips	++	++	0	++	+?
e or reasonable alternative	Alternative 1 Retain business as usual	0	0	0	0	0
Measure or	Alternative 2 Require use of zero emission vehicles at delivery point	++	++	0	+	0

Cumulative Effects

SEA1: Improve air quality

- 4.114 The selected option to minimise freight and servicing trips is anticipated to have mixed effects with significant negative effects (+/--?) on air quality. Significant negative effects arise due to the proposed use of large, out of town consolidation centres leading to increases in traffic and associated emissions around these centres. The option to match demand to network capacity is expected to have minor positive (+) effects on air quality and the option that will mitigate the impact of freight trips is anticipated to have significant positive effects on air quality (++) through decreases in traffic and resulting congestion and emissions.
- 4.115 When the three options are considered cumulatively it is expected that the SPD will result in mixed effects, with significant positive and significant negative effects (++/--?). It is considered that the three selected options will work together to cumulatively improve air quality as they will result in decreases in road traffic, congestion and vehicle emissions. However, uncertain significant negative effects are also identified as a result of the use of out of town consolidation centres, which could lead to increases in local congestion and increased traffic movements in the areas where these are located.

SEA2: Reduce activities that exacerbate climate change

- 4.116 The selected option to minimise freight and servicing trips is anticipated to have significant positive effects (++) on climate change due to the likely reduction in traffic and congestion and subsequent vehicle emissions as a result of the measures. The option to match demand to network capacity is expected to have minor positive effects (+) on climate change and the option which will mitigate the impact of freight trips is also anticipated to have significant positive effects (++) on climate change for the reasons described above.
- 4.117 Cumulatively, it is considered that the three selected options will have significant positive effects (++) on climate change. The measures within each option will work together cumulatively to significantly reduce the contribution of freight and servicing in the City to climate change through reductions in road traffic, vehicle congestion and emissions.

SEA3: Adopt the 'Waste hierarchy' in all activities - reduce, reuse, recycle

- 4.118 The selected option to minimise freight and servicing trips is expected to have minor positive effects (+) on waste as it encourages the minimisation and on-site recycling of waste. The option which will match demand to network capacity is anticipated to have negligible (0) effects on waste as does the option to mitigate the impact of freight trips. This is because the majority of the measures with each of the options do not impact on the generation or processing of waste.
- 4.119 With the three options considered cumulatively it is anticipated that the SPD will result in minor positive effects (+) on the achievement of the waste hierarchy. This is due to the measure in selected option 1 'minimise' which promotes the on-site recycling of deconstruction waste, other measures are considered to have negligible effects in terms of waste.

SEA4: Improve the health of City workers, residents and visitors

- 4.120 The selected option, which will minimise freight and servicing trips, is anticipated to have uncertain mixed effects (+/-?) on health as the majority of the measures will result in improvements to air quality due to reductions in traffic and congestion however, out of town consolidation centres are considered likely to have adverse effects on local air quality due to local increases in traffic. The option which sets out measures to match demand to network capacity is anticipated to also have mixed effects (+/-) as the measures in this option will improve air quality and safety and in some respects residential amenity, particularly during the day however, measures promoting night time and weekend servicing are considered likely to adversely affect amenity. The third option to mitigate the impacts of freight trips is expected to have minor positive (+) effects on air quality again due to improvements in air quality, safety and amenity.
- 4.121 Cumulatively it is anticipated that the three selected options will have uncertain mixed effects on health with significant positive effects (++/-?). When the positive effects arising from the measures within each of the three options are considered cumulatively it is anticipated that significant benefits to human health will result due to improvements to safety, daytime amenity for residents and visitors and air quality. However, negative effects also need to be included due to losses in residential amenity as a result of weekend and night time servicing and also potential decreases in air quality and amenity in the vicinity of consolidation centres.

SEA5: Conserve and enhance the historic environment

- 4.122 The selected option to minimise freight and servicing trips is anticipated to have mixed effects with uncertainty (+/-?) in regards to the historic environment. Positive effects will arise from a decrease in traffic enhancing the settings of heritage assets, but negative effects may arise as a result of routing to and from out of town consolidation centres though this is not certain. The second option, to match demand to network capacity is expected to have minor positive effects with uncertainty (+?) as does the option which sets out measures to mitigate the impact of freight trips. Again this is due to the reduction in traffic which will result from the measures, with uncertainty surrounding the delivery and servicing routes that may be used.
- 4.123 When the three options are considered cumulatively, uncertain mixed effects (+/-?) on the historic environment are anticipated as a result of the SPD. Mixed effects are anticipated as many of the measures within the three options may result in enhancements to the settings of heritage assets through re-routing and also reductions in congestion. However, negative effects have been identified as possible in relation to consolidation centres. The effects overall are considered to be uncertain as they depend upon the routing of vehicles which is not known at this stage.

Options with a Significant Negative Effect

- 4.124 Only the first selected option 'minimise freight and servicing trips' contains a measure that is likely to have significant negative effects on any of the SEA objectives. It is anticipated that the measure that sets out the need for out of town consolidation centres could have a significant adverse effect on SEA1: air quality as well as minor negative impacts on the SEA4: health, and possible minor negative effects on SEA5: historic environment.
- 4.125 The measure is anticipated to result in both positive and negative effects with regards to the SEA objectives. Positive effects are associated with a reduction in the number of delivery and servicing vehicles that are required to enter the City. Negative effects (which, as stated above are considered could be significant in relation to air quality) are more likely to occur outside of the City, in the vicinity of the consolidation centre. The negative effects likely to occur are:
 - An increase in traffic and possible congestion around the consolidation centres leading to increases in vehicles emissions and subsequently localised decreases in air quality and associated impacts on human health.
 - An increase in the amount of traffic leading to increase noise pollution around the consolidation centres and a likely increase in light pollution. Increases in noise and light pollution would have adverse effects on the amenity of any nearby residents.
 - An increase in the number of large vehicles using the roads around a consolidation centre leading to a decrease in road safety for other users, particularly pedestrians and cyclists.
 - Depending on the location of the consolidation centres and routes used there is the potential for the setting of heritage assets to be negatively affected through increases in traffic and noise and light pollution.
- 4.126 It should be noted that the impact of consolidation centres has been difficult to assess due to uncertainties in the locations of the centres and how they will operate (e.g. hours, routes etc.). The City Corporation has confirmed that private developers will need to identify potential suitable sites, choose to develop these, and make an application to the relevant planning authority, who will then have the final decision on whether the development is to be permitted. For this reason the City has little authority over the implementation of the consolidation centres.
- 4.127 It is recognised that there is potential to mitigate many of the potential negative effects that may arise as a result of the use of consolidation centres (including effects assessed as uncertain), depending on the location and operation of the centres. The potential mitigation is set out in **paragraph 4.54**.
- 4.128 While they are not expected to have significant negative effects it should be noted that some of the other measures contained within the selected options and within the alternative options were deemed to have minor negative effects. This includes measures that encourage night time, weekend and evening servicing and the use of micro consolidation centres.
- 4.129 The table below shows a summary of the scores given to each of the options, both selected and reasonable alternative in regards to each of the SEA objectives.

Table 4.4 SA Scores for Draft Local Plan policies and reasonable alternatives relating to Delivering Growth and Sustainable Development

SEA objectives	Selected option 1 – measures to minimise freight and servicing trips	Alternative option 1 – retain business as usual	Alternative option 2 – require use of consolidation centres	Alternative option 3 – require us of micro-consolidation and last mile zero emissions	Alternative option 4 – require waste consolidation	Selected option 2 – measures to match demand to network capacity	Alternative option 1 – retain business as usual	Alternative option 2 – no deliveries 7am to 7pm	Alternative option 3 – require night time deliveries 11pm to 7am	Selected option 3 – measures to mitigate the impact of freight trips	Alternative option 1 – retain business as usual	Alternative option 2 – require use of zero emission vehicles at point of delivery
1: Air Quality	++/?	0	+/?	+/-?	+	+	0	+	+	++	0	++
2: Climate Change	++	0	+	+	+	+	0	+	+	++	0	++
3: Waste	+	0	0	0	++	0	0	0	0	0	0	0
4: Health	+/-?	0	+/-	+/-	+	+/-	0	+/-	+/-	++	0	+
5: Historic Environment	+/-?	0	+/-?	+/-?	+	+?	0	0	0	+?	0	0

5 Monitoring

- 5.1 The SEA Regulations require that 'the responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action' and that the environmental report should provide information on 'a description of the measures envisaged concerning monitoring'. Monitoring proposals should be designed to provide information that can be used to highlight specific issues and significant effects, and which could help decision-making.
- 5.2 Monitoring should be focused on the significant environmental effects that may give rise to irreversible damage (with a view to identifying trends before such damage is caused) and the significant effects where there is uncertainty in the SEA and where monitoring would enable preventative or mitigation measures to be taken.
- 5.3 Based on this, monitoring indicators have been proposed for the SEA objectives relating to air quality (SEA1), climate change (SEA2), waste (SEA3) and health (SEA4) as these three objectives may result in significant positive or negative significant effects as a result of the selected and alternative options in the SPD. Health and the historic environment have not been included as they are unlikely to be significantly affected by the implementation of the Supplementary Planning Document.
- 5.4 Table 5.1 sets out a number of suggested indicators for monitoring the potential significant (positive and negative) environmental effects of implementing the Freight and Servicing SPD. Indicators are proposed in relation to the SEA objectives for which potential significant positive or negative effects were identified as a result of any of the SPD measures.
- 5.5 The data used for monitoring in many cases will be provided by outside bodies. Information collected by other organisations (e.g. the Environment Agency) can also be used as a source of indicators. It is therefore recommended that the City of London Corporation continues the dialogue with statutory environmental consultees and other stakeholders that has already been commenced, and works with them to agree the relevant environmental effects to be monitored and to obtain information that is appropriate, up to date and reliable.

Table 5.1 Proposed Monitoring Framework for the Freight and Servicing SPD

SA objectives	Proposed monitoring indicators
SEA1: Improve air quality	 Number of planning applications that include an air quality assessment¹⁰ (source: Planning Dept Uniform query) Changes in the concentration of air pollutants in the City (source: COL Environmental Health)
SEA2: Reduce activities that exacerbate climate change	 Percentage of deliveries made by zero emissions transport The number of vehicles used that meet the (forthcoming) Ultra Low Emission Zone standards Number of large delivery and servicing vehicles using the roads in the City¹¹ Changes in greenhouse gas emissions from the City (source: BEIS energy/CO₂ trends data)
SEA3: Adopt the 'Waste hierarchy' in all activities – reduce , reuse, recycle	 Percentage of waste sent for reuse, recycling and composting (source: estimate from waste arisings report) Quantity of waste transported by river from Walbrook Wharf (source: COL cleansing services) Number of waste collection vehicles using the roads in the City¹²
SEA4: Improve the health of city workers, residents and visitors	 Number of hospital admissions in relation to road accidents (source: COL road casualty stats) Number of road accidents involving cyclists and pedestrians (source: COL road casualty stats) Number of complaints regarding amenity (source: COL environmental health) Proportion of residents reporting their health as 'good' or' very good' (source: Census)

 $^{^{10}}$ Air quality assessment should demonstrate how the development has met air quality challenges thereby avoiding refusal. The first three measures are likely to be undertaken through periodic surveys rather than real time monitoring.

¹² As there are large numbers of private waste contractors operating in the City using a range of different vehicles it is anticipated that this would be difficult to monitor.

6 Conclusions and Next Steps

- 6.1 The selected options and reasonable alternative options for the City of London Freight and Servicing SPD have been subject to a detailed appraisal against the SEA objectives, which were developed at the Scoping stage of the SEA process.
- 6.2 The SEA has identified the potential for likely significant effects (positive and negative) for some of the options or measures contained within the selected options and reasonable alternative options. The scores can be seen in **Table 4.4**.
- 6.3 Uncertain significant negative effects have been identified for only one measure, the use of out of town consolidation centres. It is anticipated that this measure, contained within selected option 1 'Minimise Freight and Servicing Trips', could have significant adverse effects on air quality outside the City of London in the vicinity of the consolidation centres, as well as minor negative effects on health. The reasons for this are included in paragraphs 4.8 and 4.16 and potential mitigation measures are outlined in paragraphs 4.53 and 4.54.

Next Steps

- 6.4 This SEA Report will be available for consultation alongside the Draft City of London Freight and Servicing SPD between 7th August and 30th September 2017.
- 6.5 Following this consultation, the SPD and accompanying SEA Report will be updated, if required. If there are no remaining issues, the City Corporation will adopt the SPD and an SEA Adoption Statement will be produced.

LUC July 2017

Appendix 1

Consultation Responses to the SEA Scoping Report

Table A1. 1: Consultation comments received in relation to the Draft SEA Scoping Report for the Freight and Servicing SPD and how they have been addressed

Consultee comment	Response/comment and how it was addressed in the final SEA report
Environment Agency	
The Environment Agency had no comments to make as the SPD will not impact on any environmental constraints within their remit. However, if there are plans to increase the level of boat movement within the River Thames then they will need to be notified as this may change their position.	Noted.
Historic England	
Historic England considered the scoping in of cultural heritage to the SEA appropriate due to the extent of heritage assets within the City and potential impacts from freight and servicing in respect of the condition, use and appreciation of these assets. The Scoping Report was considered to be thorough and comprehensive. Historic England noted the intention to consider a wider geographic area, and therefore suggested that it may be appropriate to assess the wider impacts affecting the City Fringe and therefore against the Mayor's City Fringe SPD (2015) which sets out guidance for delivering sustainable development while safeguarding its finely balanced range of activities and uses.	The City Fringe SPD has been reviewed. It is considered that heritage assets in the City Fringe are unlikely to be significantly negatively affected by the measures proposed in the SPD. Issues outside of the City itself are likely to be centred around the consolidation centres. While the exact locations of these centres are unknown, they are unlikely to be located in the City Fringe as, in line with London Plan policy 2.17, consolidation centres should be concentrated on the Preferred Industrial Locations, none of which are located in the City or the City Fringe. The impact of an increase in traffic along roads in the vicinity of heritage assets as a result of the measures in the SPD has been addressed in the relevant section in the main report, though this is in general terms as specific routes etc. are unknown at this stage.
The London Borough of Hackney's South Shoreditch SPD (2006) was also highlighted for consideration, alongside the range of conservation area appraisal and management guidelines referred to in the consultation. Additionally areas such as Shoreditch, Bethnal Green Road / Redchurch	The SPD has been reviewed. It is not anticipated that heritage assets located in South Shoreditch will be significantly adversely affected by the measures within the SPD. As above, the measure that encourages the use of consolidation centres is that most likely to have negative effects on heritage assets. The consolidation centres, in line with the London Plan are likely to be located in preferred industrial locations, none of which are in the Shoreditch area. The effects of any increase in traffic along roads in the vicinity of heritage assets has been addressed in the relevant section in the main report, in regards to heritage assets in general as specific routing at this stage is unknown. It is noted that areas around the City, including Shoreditch, Bethnal Green Road /

Consultee comment	Response/comment and how it was addressed in the final SEA report
Street, Whitechapel and Aldgate were highlighted for consideration, as they contain a high proportion of heritage assets and dense confluence of arterial roads / transport networks converging on the City of London. The relationship and impact on these areas should be tested through the SEA process.	Redchurch Street, Whitechapel and Aldgate contain a large number of heritage assets and also contain a dense confluence of roads into / out of the City. The effect on heritage assets of an increase in traffic along roads in these areas has been included in the assessment. As particular routing and / or locations are not known at this stage the effects on specific locations remain uncertain, through it has been noted in the text that an increase in traffic in the vicinity of a heritage asset would be likely to result in negative effects. This has also then been addressed in the relevant mitigation section.
Natural England	
Natural England has no issue with the topics scoped into the full SEA report. It was the advice of Natural England, on the basis of the material supplied with the consultation, that, in so far as their strategic environmental interests are concerned (including but not limited to statutory designated sites, landscapes and protected species, geology and soils), there is unlikely to be significant environmental effects from the proposed plan.	Noted.

Appendix 2

Review of International and National Plans, Policies and Programmes

Table A2. 1: Review of international and national plans, policies and programmes relevant to the preparation of the City of London Freight and Servicing SPD and the SEA

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
International		
Johannesburg Declaration on Sustainable Development (2002)	Commitment to building a humane, equitable and caring global society aware of the need for human dignity for all.	Consider the enhancement of the natural environment.
(2002)	Renewable energy and energy efficiency. Accelerate shift towards sustainable consumption and production.	
Aarhus Convention (1998)	Established a number of rights of the public with regard to the environment. Local authorities should provide for:	Ensure that public are involved and consulted at all relevant stages of SEA production.
	 The right of everyone to receive environmental information The right to participate from an early stage in environmental decision making The right to challenge in a court of law public decisions that have been made without respecting the two rights above or environmental law in general. 	Relates to the overall SEA process.
European		
SEA Directive 2001 Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment	Provide for a high level of protection of the environment and contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.	Requirements of the Directive must be met in Strategic Environmental Assessment Relates to the overall SEA process.
The Industrial Emissions Directive 2010	This Directive lays down rules on integrated prevention and control of pollution arising from industrial activities. It also lays down rules designed to prevent or,	Consider reducing pollution.
Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)	where that is not practicable, to reduce emissions into air, water and land and to prevent the generation of waste, in order to achieve a high level of protection of the environment taken as a whole.	
The Birds Directive 2009 Directive 2009/147/EC is a codified version of Directive	The preservation, maintenance, and re-establishment of biotopes and habitats shall include the following measures: Creation of protected areas. Upkeep and management in accordance with the ecological needs of habitats	Consider implications of the SPD for birds. This issue was scoped out.

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
79/409/EEC as amended	inside and outside the protected zones. Re-establishment of destroyed biotopes.	
	Creation of biotopes.	
The Waste Framework Directive 2008	Prevention or reduction of waste production and its harmfulness. The recovery of waste by means of recycling, re-use or reclamation. Recovery or disposal of waste without endangering human health and without using processes that	Consider minimising waste production as well as promoting recycling.
Directive 2008/98/EC on waste	could harm the environment.	
The Air Quality Directive 2008	Avoid, prevent and reduce harmful effects of ambient air pollution on human	Consider maintaining and enhancing air
Directive 2008/50/EC on ambient air quality and cleaner air for Europe	health and the environment	quality.
The Landfill Directive 1999	Prevent or reduce negative effects on the environment from the landfilling of	Consider increasing recycling and reducing
Directive 99/31/EC on the landfill of waste	waste by introducing stringent technical requirements for waste and landfills.	the amount of waste.
The Packaging and Packaging Waste Directive 1994	Harmonise the packaging waste system of Member States. Reduce the environmental impact of packaging waste.	Consider minimising the environmental impact of waste and promote recycling.
Directive 94/62/EC on packaging and packaging waste		
The Habitats Directive 1992	Promote the maintenance of biodiversity taking account of economic, social,	The SPD is not considered likely to affect
Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	cultural and regional requirements. Conservation of natural habitats and maintain landscape features of importance to wildlife and fauna.	any habitats, flora or fauna of international importance.
European Spatial Development Perspective (1999)	Economic and social cohesion across the community. Conservation of natural resources and cultural heritage. Balanced competitiveness between different tiers of government.	Consider the conservation of natural resources and cultural heritage.
EU Seventh Environmental Action Plan (2002-2012)	The EU's objectives in implementing the programme are: (a) to protect, conserve and enhance the Union's natural capital; (b) to turn the Union into a resource-efficient, green and competitive low-carbon economy; (c) to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing;	Consider the protection and enhancement of the natural environment and promote energy efficiency, where relevant.

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
	 (d) to maximise the benefits of the Union's environment legislation; (e) to improve the evidence base for environment policy; (f) to secure investment for environment and climate policy and get the prices right; (g) to improve environmental integration and policy coherence; (h) to enhance the sustainability of the Union's cities; (i) to increase the Union's effectiveness in confronting regional and global environmental challenges. 	
European Convention on the Protection of the Archaeological Heritage (Valletta, 1992) Revision of the 1985 Granada Convention	Protection of the archaeological heritage, including any physical evidence of the human past that can be investigated archaeologically both on land and underwater. Creation of archaeological reserves and conservation of excavated sites.	Consider the protection of archaeological heritage.
National		
Localism Act (2011)	 The Localism Act introduces a number of measures to decentralise decision making process to the local level, creating space for Local Authorities to lead and innovate, and giving people the opportunity to take control of decisions that matter to them. The Localism Act includes a number of important packages. The new act makes it easier for local people to take over the amenities they love and keep them part of local life; The act makes sure that local social enterprises, volunteers and community groups with a bright idea for improving local services get a chance to change how things are done. The act places significantly more influence in the hands of local people over issues that make a big difference to their lives. The act provides appropriate support and recognition to communities who welcome new development. The act reduces red tape, making it easier for authorities to get on with the job of working with local people to draw up a vision for their area's future. The act reinforces the democratic nature of the planning system passing power from bodies not directly to the public, to democratically accountable ministers. The act enables Local Authorities to make their own decisions to adapt housing provision to local needs, and make the system fairer and more effective. The act gives Local Authorities more control over the funding of social 	To ensure the concepts of the Localism Act are embedded within the SEA framework. Relates to the overall SEA process.

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
	housing, helping them plan for the long- term.	
	In relation to planning, the Localism Act enables the Government to abolish regional spatial strategies, introduce Neighbourhood Plans and Local Referendums.	
National Planning Policy	Presumption in favour of sustainable development.	Sustainability appraisal should be an
Framework (2012)	Delivering sustainable development by:	integral part of the plan preparation process, and should consider all the likely significant effects on the environment, economic and social factors.
	Promoting sustainable transport	Consider sustainable transport.
	Promoting healthy communities.	Consider health and well-being.
	Meeting the challenge of climate change, flooding, and coastal change.	Consider climate change mitigation.
	Conserving and enhancing the natural environment.	Consider the conservation and enhancement of the natural environment.
	Conserving and enhancing the historic environment	Consider the conservation of historic features.
National Planning Practice Guidance (2014)	The National Planning Practice Guidance provides technical guidance on topic areas in order to support policies set out within the NPPF. It aims to allow for sustainable development as guided by the NPPF.	The principles and requirements of national policy will need to be embedded within the SEA framework and appraisal
National Planning Policy for Waste (2014)	Sets out the Government's ambition to work towards a more sustainable and efficient approach to resource use and management. Replaces Planning Policy Statement 10.	Consider waste generation and management.

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
UK Government Sustainable Development Strategy: Securing the Future (2005)	 The Strategy sets out 5 principles for sustainable development: Living within environmental limits; Ensuring a strong, healthy and just society; Achieving a sustainable economy; Promoting good governance; and Using sound science responsibly. 	To ensure that the requirements of the Strategy are embedded within the SEA framework.
	The strategy sets four priorities for action:	
	 The strategy commits to: A programme of community engagement; Forums to help people live sustainable lifestyles; Open and innovative ways for stakeholders to influence decision; educating and training 	
English Heritage Historic England Corporate Plan 2015 to 2018 (2015)	 The plan sets out its three purposes as to: Secure the preservation of ancient monuments and historic buildings; Promote the preservation and enhancement of the character and appearance of conservation areas; and Promote the public's enjoyment of, and advance their knowledge of, ancient monuments and historic buildings. 	Consider the historic environment.
Energy White Paper: Our Energy Future (2003)	 There are four key aims in this document: To put ourselves on a path to cut the United Kingdom carbon dioxide emissions- the main contributor to global warming- by some 60 % by about 2050, with real progress by 2020; To maintain the reliability of energy supplies; To promote competitive markets in the United Kingdom and beyond, helping to raise the rate of sustainable economic growth and to improve our productivity; and To make sure that every home is adequately and affordably heated. 	Consider energy efficiency.
The Carbon Plan: Delivery our Local Carbon Future (2011)	The Carbon Plan sets out the government's plans for achieving the emissions reductions it committed to in the first four carbon budgets. Emissions in the UK must, by law, be cut by at least 80% of 1990 by 2050. The UK was first to set its ambition in law and the Plan sets out progress to date.	Consider greenhouse gas emissions.

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
The Climate Change Act (2008)	The Climate Change Act was passed in 2008 and established a framework to develop an economically credible emissions reduction path. It also strengthened the UK's leadership internationally by highlighting the role it would take in contributing to urgent collective action to tackle climate change under the Kyoto Protocol.	Consider climate change.
	The Climate Change Act includes the following:	
	 2050 target. The act commits the UK to reducing emissions by at least 80% in 2050 from 1990 levels. This target was based on advice from the CCC report: Building a Low- carbon Economy. The 80% target includes GHG emissions from the devolved administrations, which currently accounts for around 20% of the UK's total emissions. Carbon Budgets. The Act requires the Government to set legally binding 'carbon budgets'. A carbon budget is a cap on the amount of greenhouse gases emitted in the UK over a five-year period. The first four carbon budgets have been put into legislation and run up to 2027. 	
Heritage Protection for the 21 st Century: White Paper (2007)	The proposals in this White Paper reflect the importance of the heritage protection system in preserving our heritage for people to enjoy now and in the future. They are based around three core principles: • Developing a unified approach to the historic environment; • Maximising opportunities for inclusion and involvement; and • Supporting sustainable communities by putting the historic environment at the heart of an effective planning system	Consider cultural heritage.
The Air Quality Strategy for England vol. 1 (2007)	The Air Quality Strategy sets out a way forward for work and planning on air quality issues by setting out the air quality standards and objectives to be achieved. It introduces a new policy framework for tackling fine particles, and identifies potential new national policy measures which modelling indicates could give further health benefits and move closer towards meeting the Strategy's objectives. The objectives of strategy are to: • Further improve air quality in the UK from today and long term. • Provide benefits to health, quality of life and the environment.	Consider air quality.
Energy Act (2008)	The Act works towards a number of policy objectives including carbon emissions reduction, security of supply, and competitive energy markets. Objectives: Electricity from Renewable Sources: changes to Renewables Obligation	Consider energy efficiency and climate change.
	(RO), designed to increase renewables generation, as well as the effectiveness of the RO.	
	Feed in tariffs for small scale, low carbon generators of electricity. Smart	

Plan/ Policy/ Programme	Objectives and Requirements	Implications for the SEA
	meters: the Act mandates a roll-out of smart meters to medium sized businesses over the next five years.	
	Renewable heat incentives: the establishment of a financial support mechanism for those generating heat from renewable sources.	
National Infrastructure Plan (2014)	The Infrastructure Plan allows for long term public funding certainty for key infrastructure areas such as: roads, rail, flood defences and science. All elements highlighted in the Plan represent firm commitment by government to supply the funding levels stipulated. The Plan also highlights what steps the government will take to ensure effective delivery of its key projects	To ensure that the SEA promoted efficient infrastructure.
Waste Management Plan for England (2013)	The Waste Management Plan follows the EU principal of waste hierarchy. This requires that prevention of waste, preparing for reuse and recycling should be given priority order in any waste legislation and policy. From this principal a key objective of The Plan is to reduce the level of waste going to landfill and to encourage recycling. The Plan also requires that larger amounts of hazardous waste should be disposed of at specially managed waste facilities.	The objectives of the national waste policy will be required to be embedded within the SEA framework.

Appendix 3Baseline Information

Introduction

Baseline information provides the basis for predicting and monitoring the likely environmental effects of a plan and helps to identify key environmental issues and means of dealing with them.

Schedule 2 of the SEA Regulations requires information to be provided on:

- (2) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.
- (3) The environmental characteristics of areas likely to be significantly affected.
- (4) Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive.

Baseline information that was collated for the SA of the City of London Local Plan has been used as the starting point. However, where necessary, it has been revised and updated to make use of the most recent available information sources. Data referred to have been chosen primarily for regularity and consistency of collection, in order to enable trends in the baseline situation to be established, and also subsequent monitoring of potential environmental effects.

As mentioned earlier in this report, the SPD encourages use of consolidation centres outside of the City. As the locations of such facilities are unknown, the baseline information below relates only to the City of London itself.

Baseline information

Climatic Factors

Energy consumption and related emissions

Energy consumption and the consequent emissions of carbon dioxide are of significant importance to the City of London and have a contributory impact on climate change. As can be seen from **Table A3.1** petroleum products, though not the largest source of energy consumed in the City or London as a whole, still contribute a large amount to energy consumption. Much of this will be a result of motorised transport, including delivery and servicing vehicles.

The design and construction of the built environment, including transport infrastructure, together with economic and social activities can have an effect on energy consumption and subsequent greenhouse gas emissions and this can be influenced by planning policies for both new and existing development.

It is important to consider the overall energy consumption and carbon dioxide emissions in the City to see whether the policies that are in place are having a positive effect on longer term trends. **Table A3.1** shows energy consumption figures for both the City of London (C of L) and Greater London (GL) for 2005 – 2014 and demonstrates that electricity accounts for the greatest proportion of energy consumption in the City, while for London this is Natural Gas. Overall energy consumption in the both the City and Greater London has decreased slightly during this period¹³.

Table A3.1: Energy consumption on the City of London (GWh) 2005-2014

Year	Petroleum Products		Natural Gas		Electricity		Renewables and Waste		Total	
	C of L	GL	C of L	GL	C of L	GL	C of L	GL	C of L	GL
2005	261	34,494	982	79,849	2616	41,434	2	89	3860	156,052
2006	255	34,656	925	76,950	2742	42,843	2	125	3924	154,736
2007	258	34,387	964	74,349	2555	42,197	2	288	3778	151,368

 $^{^{\}rm 13}$ DECC Total sub national final energy consumption 2005-2014.

Year	Petroleum Products		Natural Gas		Electricity		Renewables and Waste		Total	
2008	225	33,333	945	72,799	2584	41,814	0	154	3754	148,274
2009	208	32,352	940	67,387	2467	41,081	0	153	3615	141,131
2010	239	31,818	900	67,423	2684	41,714	0	189	3584	141,299
2011	228	30,755	831	63,915	2385	39,945	0	306	3444	135,076
2012	219	30,473	800	63,038	2482	40,807	0	288	3501	134,749
2013	213	30,045	780	61,946	2440	40,478	0	319	3433	132,960
2014	234	30,648	669	59,102	2103	40,957	0	451	3006	131,303

Flood risk

Local Authorities are responsible for carrying out Strategic Flood Risk Assessments (SFRA) for their areas to determine the level of risk from river and coastal flooding, ground water and surface water flooding including its interaction with the sewer network. Developers must submit Flood Risk Assessments (FRA) demonstrating the mitigation of any flood risk posed by new development. The Environment Agency provides information and advice to assist in the production of FRA's and SFRAs and also produce Flood Zone maps for river and coastal flooding. The map for the City shows some risk of flooding from the River Thames, however the main flood risk is to the south of the river outside the City boundary.

Climate change is an important factor in increasing flood risk particularly through the impacts of rising sea levels and more extreme weather events.

The effects of the SPD on climatic factors was scoped in to the SEA as emissions of Carbon Dioxide and other Greenhouse gases have the potential to be affected by the measures set out in the Freight and Servicing SPD.

Landscape

The City of London and its environs contain many famous landmarks which are visible both within and beyond the City's boundaries. Views of the City's skyline from the River Thames are especially notable and certain local views of St Paul's Cathedral have been protected successfully by the City Corporation's St Paul's Heights code since the 1930's. Landmarks such as St Paul's Cathedral, the Monument and the Tower of London are internationally renowned and add to the City's 'world class' status. These views are protected by an integrated range of national regional and local policies.

The Tower of London has additional view protection, implemented through the Tower of London World Heritage Site Management Plan (2016). This defines and protects a range of 'settings' of the Tower World Heritage Site which includes its relationship with historic features which are visible in the urban landscape.

The effects on landscape was scoped out of the SEA as it was not envisaged that the Freight and Servicing SPD will have any significant effects on the landscape character of the City. This is because the SPD will not propose specific sites for new development or infrastructure itself, rather its aim will be to limit the impact of additional freight and servicing trips that new development may attract.

Biodiversity, Flora and Fauna

The City of London Corporation has produced a Biodiversity Action Plan (BAP) which identified the habitats and species that are under threat, important to the City and can be monitored and promoted as an indication of local biodiversity¹⁴.

A number of factors led to the City BAP being different to those of other local authority areas:

High density buildings and built infrastructure

Small size and isolated nature of existing spaces within the City

Demographic composition of the City

Intense pressure on all outdoor spaces during lunchtime periods

¹⁴ City of London Biodiversity Action Plan 2016-2020

The species that have been identified as priorities are included below:

- Black Redstart
- Peregrine Falcon
- House Sparrow
- Bats
- Stag Beetles
- Swift
- Bumblebee

Possible effects of night time servicing on these species, particularly bats, in the City was considered further. However, light and noise pollution in the City at night are existing problems and it is not envisaged that the night time servicing that will occur as a result of the measures in the SPD will have further significant effects on these species.

The priority habitats identified by the London Biodiversity Partnership that are most relevant to the Square Mile are 'parks and urban green spaces' with an 'important habitat' identified as 'built structures'. Action plans have been developed to take into consideration these priority habitats. A further habitat recognised as a London biodiversity target within the City of London is the Tidal Thames, which is also the City's only Site of Metropolitan Importance for Nature Conservation (SMINC), and standing water which includes ponds.

There are several sites which have been designated as Sites of Importance for Nature Conservation SINCs in the City of London. The sites were identified as a result of a survey carried out jointly by the City of London Corporation and the GLA's biodiversity strategy team using criteria and procedures which are set out in Appendix I of the Mayors Biodiversity Strategy. The table below shows the SINC sites that were identified in the survey.

Table A3. 2: Sites of Importance for Nature Conservation

Site Name	Designation	Area (ha)
The River Thames and tidal tributaries	Site of Metropolitan Importance	26
The Temple Gardens	Site of Borough Importance GII	2.19
The Barbican and St Alphage Gardens	Site of Borough Importance GII	3.06
Pepys Garden Seething Lane and St Olave's Churchyard	Site of Local Importance	0.12
St Pauls Cathedral Gardens	Site of Local Importance	0.71
Cleary Gardens	Site of Local Importance	0.11
St Botolph's Bishopsgate Church Grounds	Site of Local Importance	0.27
Aldermanbury Gardens	Site of Local Importance	0.10
The Roman Wall Noble Street	Site of Local Importance	0.06
Finsbury Circus	Site of Local Importance	0.74

It is concluded that the SPD will not affect the priority habitats in the City. However, the potential for adverse effects on the Thames and tidal tributaries Site of Metropolitan Importance has been considered in more detail due to the promotion of river freight within the SPD. The SPD is in line with Policy CS9 of the Local Plan – Thames and the Riverside, which sets out the need to 'promote the functional uses of the River Thames and its environs for transport, navigation and recreation', to be achieved through a number of measures including; the use of Walbrook Wharf for waterborne freight traffic and, encouraging the use of the river for the transport of construction

and deconstruction materials. As the SPD is not changing or adding or anything to the Policy that is already set out within the Local Plan it is considered that there will be no additional effects.

Issues regarding biodiversity, Flora and Fauna were scoped out of the SEA. As the SPD will not propose any specific sites for new development or infrastructure and instead will aim to reduce the impacts of freight and servicing that new development may give rise to, it was considered that the Freight and Servicing SPD will not significantly affect the priority species or habitats in the City.

Cultural Heritage

The City of London, by virtue of its rich heritage and development, has a legacy of buildings of high architectural merit and areas of distinctive townscape quality and character. This includes 26 conservation areas and over 600 listed buildings and four historic parks and gardens at Finsbury Circus, Barbican and the Temples (Inner Temple and Middle Temple) and also includes the setting of a World Heritage Site – the Tower of London.

There are also a number of Scheduled Ancient Monuments and sites with Archaeological Potential present in the City, areas with archaeological remains in situ cover much of the area.

The Local Plan provides extensive protection to heritage and archaeological assets in the City through the following policies; CS12 Historic Environment, DM 12.1 Managing change affecting all heritage assets and spaces, DM 12.2 Development in conservation areas, DM 12.3 Listed buildings, DM 12.4 Ancient monuments and archaeology and DM 12.5 Historic Parks and Gardens.

The effects of the SPD on cultural heritage was scoped in to the SEA assessment as, due to the number of listed buildings and other heritage assets in the City, there may be the potential for effects upon the settings of these assets, for example as a result of noise and light pollution. It was also considered that a decline in air quality in the vicinity of a heritage asset may have an adverse effect on the fabric of the building or structure.

Air Quality

The Environment Act 1995 introduced the National Air Quality Strategy and the requirement for local authorities to determine if statutory air quality objectives (AQOs) are likely to be exceeded. All local authorities now report to DEFRA on an annual basis, and have the obligation to declare Air Quality Management Areas (AQMAs) and develop action plans for improvement of air quality if objectives are likely to be exceeded.

The primary air pollutants of concern in the City historically were black smoke and sulphur dioxide caused by the burning of fossil fuels (such as coal) for industrial and domestic use. Subsequent controls successfully tackled these problems. Today, the major contributor to poor air quality is motorised vehicles. Petrol and diesel engines emit a wide range of pollutants, principally carbon monoxide, oxides of nitrogen, volatile organic compounds and fine particulate matter.

Assessment of these pollutants has been carried out in accordance with the requirements of the Air Quality (England) Regulations 2000 with the result that, in 2001, the whole of the City was declared an Air Quality Management Area for Nitrogen Dioxide and fine particulate matter (PM₁₀). The cross boundary nature of air pollution means that, although actions can be taken at local level to combat some sources of air pollution, a high proportion of pollutants originate outside the City, so a wider approach is required.

In the City Nitrogen Dioxide is continuously monitored at six locations (Beech Street, Walbrook Wharf Senator House, Sir John Cass School, Farringdon Street and Walbrook rooftop). The air quality objective of 40 µg m-3 (annual average) was exceeded at all of these sites.

Fine Particulate Matter (PM_{10}) is monitored in the City at Beech Street, Upper Thames Street and at the Sir John Cass School. The deadline for achieving the Governments air quality objectives for PM_{10} was the end of 2004. The 40 μ g m-3 objective has not been exceeded at any of the recording sites since 2008.

Exposure to PM₁₀ and Nitrogen Dioxide is considered to be a significant cause of ill health and premature death in London. Research by King's College London estimated that air pollution was responsible for up to 141,000 life years lost or the equivalent of up to 9,400 deaths in London in

2010, as well as over 3,400 hospital admissions. The total economic cost associated with this was estimated at £3.7 billion. Poor air quality in the City is now considered to be a corporate risk.

Around 24% of PM_{10} and 33% of NOx (Oxides of Nitrogen, including NO2) emissions associated with traffic in the City is from the movement of freight.

Carbon Monoxide, sulphur dioxide, lead, 1.3 Butadiene and benzene concentrations in the City are low and continue to comply with the air quality objectives set for these pollutants.

The use of consolidation centres proposed in the SPD and the potential for adverse effects on air quality around these locations, which have not been identified, is high. However, the measures to encourage a reduction in the number of delivery and servicing trips and the promotion of non-motorised delivery modes and lower emission vehicles, will lead to reduced traffic, congestion and emissions which may positively affect air quality.

As stated above a main contributor to poor air quality in the City is motorised vehicles. For this reason air quality was scoped into the SEA as it was considered that the Freight and Servicing SPD is likely to affect this.

Water

Many human activities have the potential to pollute water e.g. industrial processes, urban infrastructure, transport and accidental or deliberate pollution incidents. Pollutants from these and many other sources may enter surface or ground water directly, may move slowly within ground water and emerge eventually in surface water, may run off the land or may be deposited from the atmosphere. Pollution may be from point sources or may be more diffuse and can be exacerbated by weather conditions.

The Environment Agency is responsible for maintaining and improving the quality of fresh marine, surface and underground water in England and Wales and as part of this role carries out assessments of the water quality of all natural bodies of water. The only natural bodies of water occurring in the City are the River Thames, which is a transitional water as it flows through the City, and the ground waters that exist below the City. Transitional waters are characterised by their salinity, tidal category and size.

'Very Good' water quality of the Thames has decreased slightly in 2007/08 and Good quality water has decreased by 5.5 percentage points and as a result there has been an increase in the percentage of Fairly Good, Fair, Poor and Bad quality water.

Environment Agency water quality data for the River Thames for 2012 shows the current ecological quality as 'moderate' for the City of London stretch of the Thames and the current chemical quality is shown as failing to meet the required standard¹⁵.

The effect of the SPD on water quality within the City was scoped out of the SEA. It was not envisaged that any of the measures within the SPD will have a significant effect upon water quality in the area. This is because the SPD is aiming to reduce the environmental impacts of freight and servicing trips generated by new development, rather than proposing specific sites for new development or new infrastructure which may have an effect on water quality.

Soils

Part IIA of the Environmental Protection Act 1990 and the Contaminated Land (England) Regulations 2000 provide the legal framework for the management of contaminated land. Under this legislation the City of London published its Contaminated Land Strategy in 2001. The aims of this strategy were to:

Identify and record all sensitive receptors

Identify and record all sites which have the potential to be contaminated

Assess whether a pathway exists between the potential source and receptor

If a potential pathway exists carry out a detailed inspection of the site

 $^{^{15}}$ Environment Agency River Basin Management Plans Estuarine

The Contaminated Land Strategy Review (Oct 2004) outlines the results of a series of activities carried out to achieve these aims. This review concludes that 'no evidence of significant harm or pollution of controlled water is currently taking place and there is no contaminated land in the City as defined by the legislation' The City Corporation continues to monitor potential land contamination associated with development sites and no evidence to conflict with this finding has emerged.

Effects on soils was scoped out of the SEA as it was not expected that the measures contained within the Freight and Servicing SPD will have any significant effects on soil quality in the City. As above this is because the SPD will not propose specific sites for new development, rather its aim will be to limit the impact of additional servicing and delivery for new developments.

Population and Human Health

The residential population of the City of London as defined by the 2011 Census of Population is 7,400, 4,100 of these being male and 3,300 being female. A significant proportion of the City's residential property is occupied as second homes – of the 6,100 residential properties on the City's council tax register, 1,400 are registered as second homes 16 . It should be noted that the workday population is approximately $450,000^{17}$.

The City's resident population is largely contained in within the 20 - 64 age range, with proportionately fewer old and young people¹⁸. In terms of the workday population there is a strong weighting towards males in the City, and those in the age band 20-45, people this age make up 75% of the entire workday population with the peak age being 31. This is consistent with the Greater London workforce which peaks at age 30 however, the City does have a clear weighting towards a younger working age population¹⁹.

The majority of the workforce population are employed in either professional occupations or associate professional and technical occupations. Only a small proportion is employed in process plant and machine occupations or caring, leisure and other services. Much of the workplace population of Greater London are also employed in the professional and associate professional and technical occupations however, significantly more people are employed within the caring and leisure services, process plant and machine occupations as well as sales, customer service and skilled trades²⁰.

In terms of industrial sector the largest proportion of the City's workforce population works in the financial and insurance sector (46%), followed by professional and estate (24%). The administrative and education sector dominates in Greater London (37%) followed by professional and estate (13%), only 9% of the Greater London workforce works in financial and insurance.²¹

The general perception of health in the City of London is 'Very good' (56%) with 'Good' (32%) at the next level, less than 1% rated their health as 'Very Bad' 22 . Some 4.4% of the population stated that their day to day activities are limited a lot by their health, the majority (89%) stated that their day to day activities are not limited. More than 90% of the population is not provided with any unpaid care, just over 6% are provided with 1 to 19 hours of unpaid care per week and less than 1% receive either 20 to 49 hours or 50 or more hours of unpaid care per week. In general Health is reported better in the City than in Greater London where almost 4% of residents report that they are in very bad health and 11% are in fair health 51% report themselves to be in very good health 23 .

In terms of road safety in the City, large vehicles, including good vehicles and servicing vehicles are disproportionately involved in collisions with vulnerable road users, for example pedestrians

 $^{^{16}}$ City of London Resident Population, Census 2011, Population

¹⁷ City of London Employment Trends 2016, BRES 2016

¹⁸ City of London Resident Population, Census 2011, Population

¹⁹ City of London Resident Population, Census 2011, Workday Population

 $^{^{20}}$ City of London Workforce Census 2011, Analysis by Age and Occupation

²¹ City of London Workforce Census 2011, Analysis by Industrial Sector

²² City of London Resident Population, Census 2011, Health

²³ ONS Neighbourhood Statistics, City of London, Health and Provision of Unpaid Care 2011

and cyclists. A reduction in the number of these vehicles using the roads at the same time as the more vulnerable users may have a positive impact on the safety of the City's population.

The effects of the SPD on population and human health were scoped in to the SEA. This is because it was considered that the reduction in the amount of traffic, the move to more non-motorised modes and low emission vehicles and the subsequent reduction in congestion and emissions, in addition to the change in timings of deliveries and noise and light pollution has the potential to affect the safety, health and wellbeing of the City's population and possibly those beyond the City's boundaries.

Material Assets

Offices are the predominant City land use. It was estimated in March 2017 that there was 8.66 million m2 of gross B1 office floor-space within the City, with a further 1.4 million m² under construction²⁴. This forms approximately three quarters of all City floor-space. Other main land uses are transport, open space, housing, retailing, utilities, public buildings, education and health.

Office stock in the City is continually updated to accommodate the City's growth projections and to accommodate businesses' technological requirements, ensuring that it remains at the competitive edge. There is increasing pressure for residential development in the City and it is important that this is managed so as not to affect the competitiveness of the business City. At the $31^{\rm st}$ March 2017 a total of 852 residential units were under construction with a further 77 units permitted but not commenced.

The City's transport infrastructure incorporates the streets, walkways and public realm which enable pedestrian movement; the shared spaces, highways and cycle parking facilities which enable safe and secure cycling; the highways, roads lanes and vehicle parking facilities which accommodate motor vehicles, essential for servicing and the delivery and operation of buses, taxis and private vehicles; the underground tube systems and overground rail networks and stations which provide public transport connections within and beyond the City nationally and internationally; and the river transport system for both freight and passenger transport to and from the City's wharf and piers.²⁵

The City Corporation aims to ensure that people have a range of sustainable choices of transport modes which operate in a safe, secure, sustainable and efficient manner. The City's streets encompass a range of spaces from highways suitable for through traffic, to the lanes and walkways many of which accommodate pedestrian movement forming important local links within the City.²⁶

There are a number of infrastructure types that are deemed not to be relevant to the SPD including; education, telecommunications, social and community, utilities and water.

Waste

The quantity and composition of municipal waste has been monitored by the City of London Corporation. There are two main categories of waste produced in the City: commercial and household waste. However, many companies in the City employ independent contractors to deal with waste and recycling, therefore total waste figures for the City are difficult to establish.

Municipal Waste collected by the City of London Corporation is transported by river to the Riverside Resource Recovery Energy Waste Facility in Belvedere.

The City of London also transports waste for some local authorities and companies who operate their own waste management and recycling schemes using private contractors.

In addition to the Municipal waste management in the city a large number of private waste contractors operate in the City collecting waste from commercial premises. The commercial and industrial waste estimate for the City for 2014 was 187,000 tonnes²⁷

 $^{^{24}}$ City of London Development Information Report 2017

²⁵ City of London Infrastructure Delivery Plan, 2011

²⁶ City of London Infrastructure Delivery Plan, 2011

Waste arisings and waste management capacity study review 2016, Anthesis

The high rate of redevelopment in the City means that large quantities of demolition and construction waste are generated. The constricted nature of the City and the tight timescales involved in redevelopment mean that most of this demolition waste is transported off site for either recycling or disposal. The historical lack of monitoring data makes it difficult to accurately determine the level of production of secondary and recycled aggregates from construction and demolition waste material.

The effects of the SPD on material assets, in particular waste, was scoped in to the SEA. This is due to measures in the SPD that aim to reduce waste and waste collections through on site waste management.

Effects beyond the City of London boundaries

The City of London Freight and Servicing SPD has the potential to give rise to effects beyond the City of London boundaries, in particular through night time servicing through the promotion of consolidation centres in suitable locations within Greater London, to minimise the number of trips required to service the premises within the City of London.

Although the locations of consolidation centres outside the City of London are unlikely to be identified in The Freight and Servicing SPD, there is the potential for indirect effects on the SEA topics that have been screened into the scope of the SEA.

Appendix 4

Audit trail of options and the City Corporation's reasons for decision making

Option	Was this option selected?	Reasons for selecting/not selecting for inclusion in SPD				
Minimise Freight and Servicing Trips The aim of this option is to reduce the number of delivery and servicing trips generated by premises in the City – including personal deliveries and waste collections.	Yes	 The overall reduction in the number of delivery and servicing trips generated would produce the greatest benefit in terms of reductions in traffic congestion and road danger, and the impact on air quality both in the City and beyond the City boundary. 				
Reasonable Alternative 1 Retain businesses as usual, whereby the number of deliveries allowed per day can be restricted to a number that will make the application operationally acceptable in planning terms.	No	This option was not expected to produce a sufficient change in freight and servicing traffic to achieve the objectives of the freight and servicing SPD and is therefore not selected.				
Reasonable Alternative 2 Require the use of physical consolidation centres located outside the City for all deliveries to and from the site. The site will be accessed via suitable routes.	No	 The use of physical consolidation centres outside the City boundary may be an appropriate management measure for some delivery and servicing trips. However, as the use of these centres outside the City would not be suitable for all trips (for example where goods are sourced locally), the option is not considered appropriate. At present, there is insufficient provision of consolidation facilities outside the City to make this an achievable option for consideration. 				
Reasonable Alternative 3 Require use of a micro-consolidation centre, which may be located within or outside the City boundary, for all deliveries to the site. The last mile delivery between the micro-consolidation centre and the site must be made by zero-emission means.	No	 The use of a micro-consolidation centre located within or outside the City boundary may have some impact on the numbers of freight and servicing trips into and around the City, but this type of management may not be suitable for all types of delivery trip so it may not be a reasonable option. At present, there is insufficient provision of micro-consolidation facilities in the area to make this an achievable option. At present, there is a lack of suitable zero-emission vehicle options to make this a requirement. 				

Option	Was this option selected?	Reasons for selecting/not selecting for inclusion in SPD					
Reasonable Alternative 4 Require the consolidation of all waste on-site prior to collection, with the promotion of 'reverse consolidation' whereby delivery vehicles will take away as much waste as possible	No	 The consolidation of all waste on-site prior to collection may have some impact on the numbers of vehicle trips within the City and beyond. The requirement to consolidate all waste on site prior to collection may not be feasible for all sites where site space is limited. The requirement to consolidate on-site and use reverse consolidation may not be possible where several waste contractors operate in competition. 					
Match Demand to Network Capacity The aim of this selected option is to maximise the proportion of essential delivery and servicing trips taking place outside peak times and where possible promote quiet evening or night time deliveries. All essential delivery and servicing trips should be routed appropriately, using streets that are suitable for the vehicle being used, and minimising noise, emissions and road danger along the length of the route.	Yes	 This option is selected to maximise the proportion of essential delivery and servicing trips taking place outside peak times takes account of the varying demands of different types of freight trips, and produces the maximum impact on the objectives of the SPD. Routing vehicles along suitable streets will minimise disturbance, emissions and road danger along the length of the route. 					
Reasonable Alternative 1 Retain business as usual, whereby weekday quiet times overnight (11pm – 7am) for residents are protected, along with Sunday and Bank Holidays.	No	 This option was not expected to produce a sufficient change in freight and servicing traffic to achieve the objectives of the freight and servicing SPD and is therefore not selected. 					
Reasonable Alternative 2 Move to a full daytime restriction, with no deliveries permitted between 7am and 7pm on weekdays.	No	 This option would potentially place demands on City businesses that would be significantly out of step with other parts of London, and therefore may discourage business activity in the City. The option may not be appropriate for all types of business within the City and therefore the requirement is not taken forward. 					
Reasonable Alternative 3 Require all deliveries to take place overnight	No	This option may not be suitable for all areas of the City, particularly in residential areas where there is sensitivity around overnight noise.					

Option	Was this option selected?	Reasons for selecting/not selecting for inclusion in SPD				
(i.e. between 11pm and 7am).		 The option may not be appropriate for all types of City business, particularly where buildings are not able to be staffed overnight. The option may not be suitable for all types of delivery and servicing trip – for example where full access to a building, or liaison with staff if required. 				
Mitigate the Impact of Freight Trips The aim of this selected option is; where goods and services must be transported by road, including for the last mile, use the safest and quietest zero emission means possible, which may mean moving goods or service personnel on foot or by cycle. The use of river or rail transport for the transfer of goods and waste is encouraged, but the impact of additional noise and pollution at all stages of the journey should be considered. Loading and unloading of goods should not adversely impact on highway capacity, pedestrian, cycle or vehicle movement, road or site safety or unwanted noise levels either in the City itself or on any stage of the journey.	Yes	This option is selected to mitigate of the impact of essential freight and servicing trips. The selection of appropriate means to deliver goods and services in the safest, quietest and cleanest manner possible provides the greatest impact on the objectives of the SPD while retaining the flexibility to use delivery methods suitable to the trip.				
Reasonable Alternative 1 Retain business as usual, whereby the environmental impact of servicing is required to be minimised with no formal restriction on the type of vehicle used.		This option was not expected to produce a sufficient change in freight and servicing traffic to achieve the objectives of the freight and servicing SPD and is therefore not selected.				
Reasonable Alternative 2 Require the use of zero-emission vehicles to be used at the point of delivery to the site in the City.		 This option requires the use of zero-emission vehicles to be used by all deliveries to the site within the City. At present the limited availability of a full range of zero-emission vehicles and supporting infrastructure means that this could impose a disincentive to business activity in the City. This option may not have a significant impact on traffic congestion and road 				

Option	Was this option selected?	Reasons for selecting/not selecting for inclusion in SPD
		danger reduction if there was a shift to Ultra Low Emission Vehicles rather than cycle or foot delivery.